#### ATTACHMENT 'C'

# SMAQMD RULE 201 PERMITS TO OPERATE GRAFIL INC.

- SMAQMD Permit No. 23365 Graphite Fiber Mfg Process Line 31
- SMAQMD Permit No. 11425 APC Afterburner No. 1
- SMAQMD Permit No. 15841 APC Afterburner No. 2
- SMAQMD Permit No. 15840 APC Baghouse No. 1
- SMAQMD Permit No. 21608 Graphite Fiber Mfg Process Line 32
- SMAQMD Permit No. 11426 APC Afterburner No. 3
- SMAQMD Permit No. 18279 APC Afterburner No. 4
- SMAQMD Permit No. 19659 APC Baghouse No. 2
- SMAQMD Permit No. 23363 Boiler
- SMAQMD Permit No. 23364 Boiler
- SMAQMD Permit No. 21750 IC Engine Standby
- SMAQMD Permit No. 23366 IC Engine Standby

MANAGEMENT DISTRICT

**AUTHORITY TO CONSTRUCT** 

A/C NO.:

23365 REV01

ISSUED BY:

Y R. SANTOS

DATE ISSUED:

JUNE 5, 2012 JULY 5, 2012

DATE EXPIRES:

JUNE 5, 2014

**ISSUED TO:** 

GRAFIL INC.

LOCATION:

5900 88<sup>TH</sup> STREET, SACRAMENTO, CA 95828

**DESCRIPTION:** 

MODIFICATION OF GRAPHITE FIBER MANUFACTURING PROCESS LINE 31 CONSISTING OF:

- A. FOUR (4) OXIDATION OVENS, ELECTRICALLY-HEATED, 235 KW EACH, VENTED TO APC AFTERBURNER #1 [p/o 11425]
- B. TWO (2) OXIDATION OVENS, DESPATCH, OVENPAK 25 OP LE BURNERS, 2.5 MMBTU/HR HEAT INPUT RATING EACH, NATURAL GAS-FIRED WITH ELECTRICALLY-HEATED BACK-UP
- C. LOW TEMPERATURE FURNACE, 252 KW, ELECTRICALLY-HEATED, VENTED TO APC AFTERBURNER #2 (P/O 15841)
- D. HIGH TEMPERATURE FURNACE, 400 KW, ELECTRICALLY-HEATED, VENTED TO APC AFTERBURNER #2 [P/O 15841]
- E. HIGH TEMPERATURE FURNACE END-CAP EXTRACTOR FILTER
- F. ELECTROLYTE SURFACE TREATMENT BATH, VENTED TO ATMOSPHERE
- G. SURFACE TREATED FIBER DRYER
- H. SIZE BATH
- SIZED FIBER DRYER
- J. SIZED MAKE-UP FACILITY
- K. TWO (2) LOW TEMPERATURE FURNACE END-CAP HOODS, LOW TEMPERATURE RODDING EXHAUST, TWO (2) RODDING POINT HOODS, TWO (2) HIGH TEMPERATURE END-CAP HOODS, VENTED TO PROCESS EXHAUST FAN
- L. PROCESS EXHAUST FAN, ONE (1) PRIMARY AND ONE (1) STANDBY, VENTED TO APC AFTERBURNER #1 [P/O 11425]
- M. CONTINUOUS EMISSION MONITOR, ONE (1) PRIMARY AND ONE (1) STANDBY, BOREAL LASER, INC., CONTINUOUS HYDROGEN CYANIDE (HCN) MONITOR, MODEL GAS FINDER, SERIAL NOS. HCNFC 2001 AND HCNFC 2003, LOCATED IN PLANT EXHAUST STACK FOR AFTERBURNER EXHAUST AND PLANT AIR DUCTING (ONE HCN MONITOR SERVING BOTH LINE 31 [A/C 23365] AND LINE 32 [P/O 21608])

MANAGEMENT DISTRICT

## **AUTHORITY TO CONSTRUCT**

(CONTINUED)

## **AUTHORITY TO CONSTRUCT CONDITIONS**

#### START-UP REQUIREMENTS

S1. Upon installation of the equipment authorized in this Authority to Construct, the owner/operator shall contact the Sacramento Metropolitan Air Quality Management District (SMAQMD) at (916)874-4858 to arrange for an initial inspection.

[Basis: SMAQMD Rule 201, Section 405]

- S2. This Authority to Construct/Operate shall serve as a temporary Permit to Operate provided that:
  - A. The SMAQMD has been notified to conduct an initial inspection,
  - B. The equipment installed matches the equipment authorized in this Authority to Construct, and
  - C. The equipment is operated in compliance with all conditions listed within this Authority to Construct. [Basis: SMAQMD Rule 201, Section 405]

#### **GENERAL**

1. The equipment shall be properly maintained and operated in accordance with the manufacturer's recommendations at all times.

[Basis: SMAQMD Rule 201, Section 405]

- 2. The Air Pollution Control Officer and/or authorized representatives, upon the presentation of credentials, shall be permitted:
  - A. To enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this Authority to Construct, and
  - B. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct, and
  - C. To inspect any equipment, operation, or method required in this Authority to Construct, and
  - D. To sample emissions from the source or require samples to be taken.

[Basis: SMAQMD Rule 201, Section 405]

3. This Authority to Construct does not authorize the emission of air contaminants in excess of those allowed by Division 26, Part 4, Chapter 3, of the California Health and Safety Code or the Rules and Regulations of the Sacramento Metropolitan Air Quality Management District.

[Basis: SMAQMD Rule 201, Section 405]

4. The equipment shall not discharge such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

[Basis: SMAQMD Rule 402, Section 301]

MANAGEMENT DISTRICT

## **AUTHORITY TO CONSTRUCT**

(CONTINUED)

5. A legible copy of this Authority to Construct shall be maintained on the premises with the equipment. [Basis: SMAQMD Rule 201, Section 401]

#### **EMISSION LIMITATIONS**

6. The graphite fiber manufacturing process shall not discharge into the atmosphere any visible air contaminants other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour, which are as dark or darker than Ringelmann No. 1 or equivalent to or greater than 20% opacity.

[Basis: SMAQMD Rule 401, Section 301]

7. Combined emissions from the two (2) oxidation Ovens shall not exceed the following limits:

[Basis: SMAQMD Rule 202, Section 410.2]

Pollutant	Emission Factor (A)		tion Ovens (2 x 2.5 MN mum Allowable Emissio	
	(lb/mmcf)	(lb/day)	(lb/quarter)	(lb/year)
VOC	5.5	0.7	61	241
NOx	36.4	4.4	402	1,594
SOx	0.6	0.1	7	26
PM10	7.6	0.9	84	333
PM2.5	7.6	0.9	84	333
СО	148	17.8	1,634	6,482
GHG	117,000	7.0 tons/day	646 tons/quarter	2,562 tons/year

- (A) Emission factors for VOC, SOx, PM10 and PM2.5 are from AP-42, Table 1.4-1 ~ 1.4-2, Emission Factors from Natural Gas Combustion, pg 1.4-5 ~ 1.4-6 (7/98). Emission factors for NOx and CO are based on 30 ppmvd at 3% Oxygen and 200 ppmvd at 3% Oxygen, respectively. Emission factor for PM2.5 is the PM10 factor assuming all PM10 to be PM2.5. GHG emission factor is expressed as CO<sub>2</sub>e and is from EPA's Mandatory Reporting of Greenhouse Gases Rule (74 FR 58260). Tables C-1 & C-2.
- (B) Emissions are based on the ovens operating at maximum combined heat input capacity of 0.005 mmcf/hour, 24 hours/day, 92 days/quarter, 365 days/year and the emission factors in this table.

MANAGEMENT DISTRICT

## **AUTHORITY TO CONSTRUCT**

(CONTINUED)

8. The combined total hourly emissions from the Graphite Fiber Manufacturing Process Lines 31 and 32 shall not exceed the following limits, averaged over a three-hour period:

[Basis: SMAQMD Rule 202, Section 410.2]

Pollutant		per Manufacturing Process Lir num Allowable Combined Emis (Based on 3-Hour Average)	
	Main Stack (lb/hour)	Fugitive Exhaust (lb/hour)	Total (lb/hour)
VOC	3.32	0.02	3.34
NOx	5.74	N/A	5.74
SOx (A)	5.994	N/A	5.994
PM10	5.2	N/A	5.2
PM2.5	5.2	N/A	5.2
СО	21.0	N/A	21.0

- (A) Emission factor for SOx is based on the combined SOx emissions from the products of combustion from the four APC Afterburners with a combined heat input capacity of 23.16 MMBtu/hr, SOx emission factor of 0.0006 lb/MMBtu from AP-42, Table 1.4-2, and manufacturing process parameters based on 20 ppmv and 31,000 scfm.
- 9. The combined total quarterly emissions from the Graphite Fiber Manufacturing Process Lines 31 and 32 shall not exceed the following limits:

[Basis: SMAQMD Rule 202, Section 410.2]

		hite Fiber Manufactur Maximum Allowable		
Pollutant	1 <sup>st</sup> Quarter (lb/quarter)	2 <sup>nd</sup> Quarter (lb/quarter)	3 <sup>rd</sup> Quarter (lb/quarter)	4 <sup>th</sup> Quarter (lb/quarter)
VOC	7,214	7,295	7,375	7,375
NOx	12,398	12,536	12,674	12,674
SOx	12,947	13,091	13,235	13,235
PM10	11,232	11,357	11,482	11,482
PM2.5	11,232	11,357	11,482	11,482
СО	46,360	45,864	46,368	46,368

MANAGEMENT DISTRICT

### **AUTHORITY TO CONSTRUCT**

(CONTINUED)

10. Hydrogen cyanide (HCN) emission concentration from the plant exhaust, as measured by the primary continuous HCN emission monitor, shall be not exceed the following limit:

[Basis: SMAQMD Rule 202, Section 410.2]

Pollutant	Maximum Allowable Emission Concentration ppmv (A)
Hydrogen Cyanide (HCN)	95

<sup>(</sup>A) Concentration averaged over a period of one (1) hour as shown on the digital chart recorder.

#### **EQUIPMENT OPERATION**

11. The precursor processing rate for the Graphite Fiber Manufacturing Process Lines 31 and 32 shall be limited to the precursor processing rate divided by 0.9 that the graphic fiber manufacturing process lines were operating at during the most recent compliance source test where compliance with the VOC, NOx, PM10, PM2.5 and CO emission rates outlined in Condition No. 8 was demonstrated. The precursor processing rate shall be determined as follows:

[Basis: SMAQMD Rule 201, Section 405]

Precursor Processing Rate = Line Speed \*  $\Sigma$ [Number of Filaments \* Decitex \* Number of Ends] \* E-07 (kg/hour)

Where: Decitex = grams/10,000 meter of a single filament

12. The line speed meter and associated digital chart recorder shall be maintained to monitor and record precursor process rates when the process is in operation. In the event of a digital chart recorder failure, manual hourly line speed recordkeeping is allowed. Manual recordkeeping shall not exceed five (5) time periods per calendar year and each period shall not exceed 24 hours.

[Basis: SMAQMD Rule 201, Section 405]

13. The primary continuous HCN emission monitor shall be operated whenever the process is in operation. The HCN monitor shall be maintained and calibrated. Grafil Inc. shall follow the HCN monitor maintenance and calibration schedule, as per attached **Attachment 'A'**, approved by the Air Pollution Control Officer.

[Basis: SMAQMD Rule 201, Section 405]

14. The oxidation ovens, LT furnace and HT furnace in the Graphite Fiber Manufacturing Process Line 31 shall not process fiber unless the exhaust and the fugitive emissions generated during process upset, including start up, are vented to the APC Afterburner #1 (P/O 11425) and APC Afterburner #2 (P/O 15841), respectively, which are in compliance with all listed permit conditions.

[Basis: SMAQMD Rule 201, Section 405]

MANAGEMENT DISTRICT

## **AUTHORITY TO CONSTRUCT**

(CONTINUED)

- 15. The exhaust from APC Afterburner #2 (P/O 15841) shall be vented to APC Baghouse #1 (P/O 15840). [Basis: SMAQMD Rule 201, Section 405]
- 16. The exhaust from APC Afterburner #4 (P/O 18279) shall be vented to APC Baghouse #2 (P/O 19659). [Basis: SMAQMD Rule 201, Section 405]

#### **EMISSION TESTING**

- 17. Emissions of HCN, VOC, NOx, SOX, PM10, PM2.5 and CO shall be tested annually to verify compliance with Condition Nos. 8 and 10. The emissions testing shall conform to the following test conditions and time schedule:
  - A. The precursor process rate stated in Condition No. 11 will not be in effect for the annual emission test. However, the precursor process rate utilized during the annual emission test will establish the maximum allowable precursor process rate for the following year as stated in Condition No. 11.
  - B. Submit a source test plan, outlining the test methods and operating parameters, to the Air Pollution Control Officer for approval at least 30 days before the source test is to be performed.
  - C. Notify the Air Pollution Control Officer at least 7 days prior to the source test date of the exact date and time of the test if the date has changed from that approved in the source test plan.
  - D. Submit the source test report to the Air Pollution Control Officer within 60 days from the completion of the test(s).

[Basis: SMAQMD Rule 201, Section 303.2]

18. The Air Pollution Control Officer may waive all or any portion of the annual source test requirements if, in the Air Pollution Control Officer's sole judgment, prior test results indicate that an adequate margin of compliance has been maintained.

[Basis: SMAQMD Rule 201, Section 405]

MANAGEMENT DISTRICT

# **AUTHORITY TO CONSTRUCT**

(CONTINUED)

#### **EMISSION OFFSETS**

19. Grafil Inc. shall provide sufficient emission reduction credits (ERC) in accordance with Condition Nos. 20 and 21 to fully offset the following VOC, NOx, PM10 and PM2.5.

			Emiss	sion Reduction	Credit	
Permit No	Pollutant	1 <sup>st</sup> Quarter (lb/quarter)	2 <sup>nd</sup> Quarter (lb/quarter)	3 <sup>rd</sup> Quarter (lb/quarter)	4 <sup>th</sup> Quarter (lb/quarter	Total (lb/year)
	VOC	59	60	61	61	241
A/C 23365	NOx	393	398	402	402	1,595
	PM10	82	83	84	84	333
	PM2.5	82	83	84	84	333

20. Prior to commencing construction/modification of the Graphite Fiber Manufacturing Process Line 31, Grafil Inc. shall submit to the SMAQMD Emission Reduction Credit certificate(s) for the quarterly emissions in Condition No. 20 calculated according to the following ratios:

Location of		Emission	Offset Ratio	
Emission Offset	Volatile Organic Compounds or Nitrogen Oxides	PM2.5 or Ammonia	Other Nonattainment Pollutants	Attainment Pollutants
Same Source	1.3 to 1.0 if used at a major stationary source or major modification at a major source OR 1.0 to 1.0 if used at a non- major stationary source or non-major modifications at a major source	1.0 to 1.0	1.0 to 1.0	1.0 to 1.0

**MANAGEMENT DISTRICT** 

# **AUTHORITY TO CONSTRUCT**

(CONTINUED)

Location of		Emission C	Offset Ratio	
Emission Offset	Volatile Organic Compounds or Nitrogen Oxides	PM2.5 or Ammonia	Other Nonattainment Pollutants	Attainment Pollutants
Within 15-mile Radius and within Sacramento Valley Air Basin	1.3 to 1.0 if used at a major stationary source or major modification at a major source OR 1.2 to 1.0 if used at a non- major stationary source or non-major modifications at a major source OR 1.0 to 1.0 if used at a stationary source with an emission increase calculated pursuant to Section 413.4 of the following levels: ≥5000 lb/qtr and <7500 lb/qtr	1.2 to 1.0	1.2 to 1.0	1.1 to 1.0
Greater than 15- mile Radius and within Sacramento Valley Air Basin	2.0 to 1.0	2.0 to 1.0	2.0 to 1.0	1.2 to 1.0
More than 50-mile Radius and within Sacramento Valley Air Basin	>2.0 to 1.0 (*)	>2.0 to 1.0 (*)	>2.0 to 1.0 (*)	>1.2 to 1.0 (*)

<sup>(\*)</sup> Based on case-by-case determination.

**MANAGEMENT DISTRICT** 

# **AUTHORITY TO CONSTRUCT**

(CONTINUED)

21. If Grafil Inc. provides emission offsite as specified in Condition No. 20 from the SMAQMD Community Bank, they shall be calculated according to the following ratios: [SMAQMD Rule 202, Section 303.2]

Emission Offsets Obtained Rule 205 – Community Bank and Priority Rule 206 – Mobile and Transportation Source En	Reserve Bank or
Source Type/Pollutant	Emission Offset Ratio
For use by non-major stationary sources or non-major modifications for all pollutants if the non-major modifications has an increase in emissions calculated pursuant to Rule 202, Section 413.4 of 250 lb/day or less of VOC, NOx and SOx, and 80 lb/day or less of PM10.	1.0 to 1.0
If the non-major modification has an increase in emissions calculated pursuant to Rule 202, Section 413.4 that is greater than 250 lb/day of VOC, NOx and SOx, or greater than 80 lb/day of PM10.	1.2 to 1.0
For use by major stationary sources or major modifications for volatile organic compounds or nitrogen oxides.	1.3 to 1.0
For use by major stationary sources or major modifications for other nonattainment pollutants, except for PM2.5 and all attainment pollutants.	1.2 to 1.0
For use by major stationary sources or major modifications for PM2.5 or ammonia if determined to be PM2.5 precursor by Rule 202, Section 234.	1.0 to 1.0

MANAGEMENT DISTRICT

## **AUTHORITY TO CONSTRUCT**

(CONTINUED)

#### RECORDKEEPING AND REPORTING

22. The following records shall be continuously maintained on-site for the most recent five-year period and shall be made available to the Air Pollution Control Officer upon request. Monthly records as specified in the table below shall be made available for inspection within 30 days from the end of the reporting period. [Basis: SMAQMD Rule 201, Section 405]

Frequency	Information to be Recorded
When Operated	A. The maximum precursor process rate allowed calculated pursuant to Condition No. 11.
	<ul> <li>B. The production data for each production run shall include the following: <ol> <li>Weight of precursor processed (kg/hr)</li> <li>Line speed (m/hr)</li> <li>Number and type (Decitex of ends processed)</li> <li>Number of filaments</li> <li>Start and end dates and time</li> <li>Continuous HCN concentration at the plant exhaust stack (PPM)</li> </ol> </li> <li>C. HCN monitor maintenance activity log.</li> </ul>
Monthly	Monthly facility natural gas usage (therms/month)

Note: Grafil Inc. shall follow a recordkeeping format approved by the Air Pollution Control Officer.

23. Emission test reports shall be maintained on-site for the most recent five-year period and shall be made available to the Air Pollution Control Officer upon request.

[Basis: SMAQMD Rule 201, Section 405]

24. The Air Pollution Control Officer shall be notified within eight (8) hours of determining that the primary continuous HCN monitor indicates HCN concentration in excess of 95 PPM, averaged over a period of one (1) hour as shown on the monitor's electronic chart recorder. A written follow-up report shall be submitted within seven (7) days to the Air Pollution Control Officer. The report shall include the date, time and PPM reading of the exceed HCN concentration and any shut down procedures implemented.

[Basis: SMAQMD Rule 201, Section 405]

- 25. The Air Pollution Control Officer shall be notified of any malfunction or breakdown of the Air Pollution Control equipment as required by Rule 602 Breakdown Conditions: Emergency Variance.

  [Basis: SMAQMD Rule 602, Section 301]
- 26. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.).

[Basis: SMAQMD Rule 201, Section 303.1]

MANAGEMENT DISTRICT

# **AUTHORITY TO CONSTRUCT**

(CONTINUED)

Your application for this air quality Authority to Construct was evaluated for compliance with Sacramento Metropolitan Air Quality Management District (SMAQMD), state and federal air quality rules. The following listed rules are those that are most applicable to the operation of your equipment. Other rules may also be applicable.

SMAQMD RULE NO.	RULE TITLE
201	GENERAL PERMIT REQUIREMENTS
202	NEW SOURCE REVIEW
301	PERMIT FEES - STATIONARY SOURCE
401	RINGELMANN CHART
402	NUISANCE
406	SPECIFIC CONTAMINANTS
420	SULFUR CONTENT OF FUELS

In addition, the conditions on this Authority to Construct may reflect some, but not all, requirements of these rules. There may be other conditions that are applicable to the operation of your equipment. Future changes in prohibitory rules may establish more stringent requirements which may supersede the conditions listed here.

For further information, please consult your SMAQMD rulebook or contact the SMAQMD for assistance.



# PERMIT

IS HEREBY GRANTED TO

GRAFIL INC. 5900 88TH STREET SACRAMENTO, CA 95828

EQUIPMENT LOCATION: 5900 88TH STREET, SACRAMENTO

TO OPERATE

#### AIR POLLUTION CONTROL SYSTEM #1 CONSISTING OF:

- 1: APC AFTERBURNER #1, JOHN ZINK THERMAL OXIDIZER, MAXIMUM RATING OF 9.18 MMBTU/HR.
- EXHAUST SYSTEM VENTING OXIDATION OVENS AND HT FURNACE FROM GRAPHITE FIBER MFG. PROCESS LINE 31 (PO 11430).

#### SUBJECT TO THE FOLLOWING CONDITIONS

#### GENERAL

- OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS
  SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
- THE EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
- 3. NOTIFY THE AIR POLLUTION CONTROL OFFICER OF ANY MALFUNCTIONS OR BREAKDOWN OF THE AIR POLLUTION CONTROL EQUIPMENT AS REQUIRED BY RULE 602 BREAKDOWN CONDITIONS; EMERGENCY VARIANCE:

#### **EQUIPMENT OPERATION**

- 4. A MINIMUM TEMPERATURE OF 750° C, AVERAGED OVER A ONE HOUR PERIOD, SHALL BE MAINTAINED IN THE COMBUSTION ZONE OF THE AFTERBURNER WHEN THE TEMPERATURE OF THE OXIDATION OVENS IS AT 205° C OR GREATER.
- 5. THE TEMPERATURE GAUGE AND ASSOCIATED CHART RECORDER FOR THE AFTERBURNER SHALL BE MAINTAINED TO MONITOR AND RECORD THE TEMPERATURE WHEN THE PROCESS IS IN OPERATION. IN THE EVENT OF A CHART RECORDER FAILURE, MANUAL HOURLY TEMPERATURE RECORD KEEPING IS ALLOWED. MANUAL RECORD KEEPING SHALL NOT EXCEED 5 TIME PERIODS PER CALENDAR YEAR AND EACH PERIOD SHALL NOT EXCEED 24 HOURS.

#### RECORD KEEPING

6. RECORD OF THE AFTERBURNER TEMPERATURE SHALL BE CONTINUOUSLY MAINTAINED FOR THE MOST RECENT 3
YEAR PERIOD AND SHALL BE MADE AVAILABLE TO THE AIR POLLUTION CONTROL OFFICER UPON REQUEST.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26, CHAPTER 3, OF THE HEALTH AND SAFETY CODES OF THE STATE OF CALIFORNIA OR THE RULES AND REGULATIONS OF THE AIR QUALITY MANAGEMENT DISTRICT.

DATE: EXPIRES 10-24-96 UNLESS RENEWED

**PERMIT NO. 11425** 

PAGE 1 OF 1 PAGE(S)

NORMAN D. COVELL
AIR POLLUTION CONTROLOFFICER

REVOCABLE AND NON-TRANSFERRABLE



# PERMIT TO OPERATE

GRAFIL, INC. 5900 88TH STREET **SACRAMENTO, CA 95828** 

EQUIPMENT LOCATION: 5900 88TH STREET, SACRAMENTO

PERMIT NO.	EQUIPMENT DESCRIPTION
15841	AIR POLLUTION CONTROL SYSTEM CONSISTING OF:  1. APC AFTERBURNER #2, ZEECO, 2.4 MMBTU/HR HEAT INPUT RATING  2. EXHAUST SYSTEM VENTING THE LOW TEMPERATURE AND HIGH TEMPERATURE FURNACES OF THE GRAPHITE FIBER MANUFACTURING PROCESS LINE 31 (P/O 15842)

#### SUBJECT TO THE FOLLOWING CONDITIONS:

#### **GENERAL**

- THE EQUIPMENT SHALL BE PROPERLY MAINTAINED.
- 2. THE AIR POLLUTION CONTROL OFFICER AND/OR AUTHORIZED REPRESENTATIVES, UPON THE PRESENTATION OF CREDENTIALS, SHALL BE PERMITTED:
  - A. TO ENTER UPON THE PREMISES WHERE THE SOURCE IS LOCATED OR IN WHICH ANY RECORDS ARE REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE. AND
  - B. AT REASONABLE TIMES TO HAVE ACCESS TO AND COPY ANY RECORDS REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
  - C. TO INSPECT ANY EQUIPMENT, OPERATION, OR METHOD REQUIRED IN THIS PERMIT TO OPERATE, AND
  - D. TO SAMPLE EMISSIONS FROM THE SOURCE OR REQUIRE SAMPLES TO BE TAKEN.
- 3. THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26, PART 4, CHAPTER 3, OF THE CALIFORNIA HEALTH AND SAFETY CODE OR THE RULES AND REGULATIONS OF THE AIR QUALITY MANAGEMENT DISTRICT.
- A LEGIBLE COPY OF THIS PERMIT SHALL BE MAINTAINED ON THE PREMISES WITH THE EQUIPMENT.

DATE ISSUED:

02-26-2003

DATE EXPIRES: 10-24-2003 (UNLESS RENEWED)

NORM COVELL

AIR POLILUTION CONTROL OFFICER

**PERMIT NO. 15841** 

PAGE 1 OF 2 PAGES

REVOCABLE AND NON-TRANSFERABLE

#### (916) 874-4800 FAX (916) 874-4899

# SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

#### **EMISSIONS LIMITATIONS**

- 5. THE PROCESS SHALL NOT DISCHARGE INTO THE ATMOSPHERE ANY VISIBLE AIR CONTAMINANTS OTHER THAN UNCOMBINED WATER VAPOR, FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR, WHICH ARE AS DARK OR DARKER THAN RINGELMANN NO. 1 OR EQUIVALENT TO OR GREATER THAN 20% OPACITY.
- 6. EMISSIONS FROM THE APC AFTERBURNER #2 ARE INCLUDED IN THE COMBINED EMISSIONS FROM THE GRAPHITE FIBER MANUFACTURING PROCESS LINE 31.

#### **EQUIPMENT OPERATION**

7. THE APC AFTERBURNER #2 SHALL BE OPERATED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

#### RECORDKEEPING

8. NO RECORDKEEPING SHALL BE REQUIRED FOR THE AFTERBURNER OPERATIONS.

YOUR APPLICATION FOR THIS AIR QUALITY BERMIT TO OPERATE WAS EVALUATED FOR COMPLIANCE WITH SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT (AGMD) STATE AND FEDERAL AIR QUALITY RULES. THE FOLLOWING LISTED RULES ARE THOSE THAT ARE MOST APPLICABLE TO THE QUERATION OF YOUR EQUIPMENT, OTHER RULES MAY ALSO BE APPLICABLE.

ACMD RULE NO.  RULE TITLE  201 GENERAL PERMIT REQUIREMENTS		201 GENERAL PERMIT REQUIREMENTS
		202 ANEWISOURCE REVIEW
	202 AEWSOURGERBYEVE	

IN ADDITION, THE CONDITIONS ON THIS PERMIT TO OPERATE MAY REFLECT SOME, BUT NOT ALL REQUIREMENTS OF THESE RULES. THERE MAY BE OTHER CONDITIONS THAT ARE APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT FUTURE CHANGES IN PROHIBITORY RULES MAY ESTABLISH MORE STRINGENT REQUIREMENTS WHICH MAY SUPERSEDE THE CONDITIONS LISTED HERE!

FOR FURTHER INFORMATION PLEASE CONSULT YOUR ACMORULEBOOK OF CONTACT THE ACMOROR SISTANCE



# PERMIT TO OPERATE

GRAFIL, INC. 5900 88TH STREET **SACRAMENTO, CA 95828** 

EQUIPMENT LOCATION: 5900 88TH STREET, SACRAMENTO

PERMIT NO.	EQUIPMENT DESCRIPTION
15840	APC BAGHOUSE, JM CONSTRUCTION, MODEL 120 JMCE 100T, PULSE JET, 1584 SQ. FT. CLOTH FILTE AREA, 1200 CFM AIR FLOW RATE, VENTING THE APC AFTERBURNER #2 (P/O 15841)

#### SUBJECT TO THE FOLLOWING CONDITIONS:

#### **GENERAL**

- 1. THE EQUIPMENT SHALL BE PROPERLY MAINTAINED.
- 2. THE AIR POLLUTION CONTROL OFFICER AND/OR AUTHORIZED REPRESENTATIVES, UPON THE PRESENTATION OF CREDENTIALS, SHALL BE PERMITTED:
  - A. TO ENTER UPON THE PREMISES WHERE THE SOURCE IS LOCATED OR IN WHICH ANY RECORDS ARE REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
  - B. AT REASONABLE TIMES TO HAVE ACCESS TO AND COPY ANY RECORDS REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
  - C. TO INSPECT ANY EQUIPMENT, OPERATION, OR METHOD REQUIRED IN THIS PERMIT TO OPERATE, AND
  - D. TO SAMPLE EMISSIONS FROM THE SOURCE OR REQUIRE SAMPLES TO BE TAKEN.
- 3. THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26, PART 4, CHAPTER 3, OF THE CALIFORNIA HEALTH AND SAFETY CODE OR THE RULES AND REGULATIONS OF THE AIR QUALITY MANAGEMENT DISTRICT.
- 4. A LEGIBLE COPY OF THIS PERMIT SHALL BE MAINTAINED ON THE PREMISES WITH THE EQUIPMENT.

DATE ISSUED:

02-26-2003

DATE EXPIRES:

10-24-2003 (UNLESS RENEWED)

NORM COVELL

AIR POLILUTION CONTROL OFFICER

PAGE 1 OF 2 PAGES

**PERMIT NO. 15840** 

REVOCABLE AND NON-TRANSFERABLE

#### **EMISSIONS LIMITATIONS**

- 5. THE BAGHOUSE SHALL NOT DISCHARGE INTO THE ATMOSPHERE ANY VISIBLE AIR CONTAMINANTS OTHER THAN UNCOMBINED WATER VAPOR, FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR, WHICH ARE AS DARK OR DARKER THAN RINGELMANN NO. 1 OR EQUIVALENT TO OR GREATER THAN 20% OPACITY.
- 6. EMISSIONS FROM THE APC BAGHOUSE ARE INCLUDED IN THE COMBINED EMISSIONS FROM THE GRAPHITE FIBER MANUFACTURING PROCESS LINE 31.

#### **EQUIPMENT OPERATION**

- 7. EACH BAGHOUSE SHALL OPERATE CONTINUOUSLY WHENEVER THE PROCESS LINE THEY SERVE IS IN OPERATION.
- 8. EACH BAGHOUSE SHALL BE ALLOWED UP TO 5 MINUTES EACH HOUR OF NON-SILMULTANEOUS BYPASS OPERATION. BYPASS OCCURS WHEN THE EMISSIONS FROM A PROCESS LINE IS DIRECTLY EMITTED INTO THE MAIN EXHAUST STACK.
- 9. BAGHOUSE DISCHARGE OF COLLECTED MATERIAL SHALL BE INTO A COVERED CONTAINER AND ANY TRANSFER OF THIS MATERIAL SHALL BE PERFORMED IN A MANNER PREVENTING FUGITIVE EMISSIONS.

#### RECORDKEEPING

10. THE FOLLOWING RECORD SHALL BE CONTINUOUSLY MAINTAINED ON-SITE FOR THE MOST RECENT FIVE-YEAR PERIOD AND SHALL BE MADE AVAILABLE TO THE AIR POLLUTION CONTROL OFFICER UPON REQUEST.

FREQUENCY	INFORMATION TO BE RECORDED
AT ALL TIMES	DATE, START TIME AND END TIME OF THE OPERATION OF EACH APC BAGHOUSE BYPASS SYSTEM.

YOUR APPLICATION, FOR THIS AIR QUALITY REPORT TO OPERATE WAS EVALUATED FOR COMPLIANCE WITH SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT (AQMO). STATE AND FEDERAL AIR QUALITY RULES. THE FOLLOWING LISTED RULES ARE THOSE THAT ARE MOST APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. OTHER RULES MAY ALSO BE APPLICABLE.

AQMD RULE NO.	RULETITLE
DAME WATER IN	 
and the second second second second	 

201 GENERAL PERMIT REQUIREMENTS

202 NEW SOURCE REVIEW

ADI RINGELMANN.CHART. 404 PARTICULATE MATTER

IN ADDITION, THE CONDITIONS ON THIS PERMIT TO OPERATE MAY REFLECT SOME, BUT NOT ALLA REQUIREMENTS OF THESE RULES. THERE MAY BE OTHER CONDITIONS THAT ARE APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT FUTURE, CHANGES, IN PROHIBITORY RULES MAY ESTABLISH MORE STRINGENT REQUIREMENTS. WHICH MAY SUPERSEDE THE CONDITIONS LISTED HERE.

FOR FURTHER INFORMATION PLEASE CONSULT YOUR ADMID BULLEDOK OR CONTACT THE ADMID FOR ASSISTANCE



# PERMIT TO OPERATE

**ISSUED TO:** 

GRAFIL INC.

EQUIPMENT LOCATION: 5900 88TH STREET, SACRAMENTO, CA 95828

	, .	
PERMIT NO.		EQUIPMENT DESCRIPTION
	GRA	APHITE FIBER MANUFACTURING PROCESS LINE 32 CONSISTING OF
	A	FOUR (4) OXIDATION OVENS, ELECTRICALLY-HEATED, 235 KW EACH, VENTED TO APC
		AETERRIDNER #3 (P/O 11426)
	В.	TWO (2) OXIDATION OVENS, ELECTRICALLY-HEATED, 400 KW EACH, VENTED TO APC
		AETERBURNER #3 (P/O 11426)
	C.	LOW TEMPERATURE FURNACE, 252 KW, ELECTRICALLY-HEATED, VENTED TO APC
		ACTEDQHIDNED #4 (DIO 18279)
	D.	HIGH TEMPERATURE FURNACE, 400 KW, ELECTRICALLY-HEATED, VENTED TO APC
		AFTERBURNER #4 (P/O 18279)
	E.	HIGH TEMPERATURE FURNACE END-CAP EXTRACTION FILTER
	F.	ELECTROLYTE SURFACE TREATMENT BATH, VENTED TO ATMOSPHERE
		SURFACE TREATED FIBER DRYER
	Н.	SIZE BATH
21608	l.	SIZED FIBER DRYER
	J.	SIZED MAKE-UP FACILITY
	K.	TWO (2) LOW TEMPERATURE FURNACE END-CAP HOODS, LOW TEMPERATURE
		RODDING EXHAUST, TWO (2) RODDING POINT HOODS, TWO (2) HIGH TEMPERATURE
		END-CAP HOODS, VENTED TO PROCESS EXHAUST FAN PROCESS EXHAUST FAN, ONE (1) PRIMARY AND ONE (1) STANDBY, VENTED TO APC
	L.	PROCESS EXHAUST FAN, ONE (1) PRIMART AND ONE (1) OTHERDS, VEHICLES TO THE
		AFTERBURNER #3 (P/O 11426) CONTINUOUS EMISSION MONITOR, ONE (1) PRIMARY AND ONE (1) STANDBY, BOREAL CONTINUOUS EMISSION MONITOR, ONE (1) PRIMARY AND ONE (1) STANDBY, BOREAL CAS
	M.	LASER, INC., CONTINUOUS HYDROGEN CYANIDE (HCN) MONITOR, MODEL GAS
		FINDER, SERIAL NOS.: HCNFC 2001 AND HCNFC 2003, LOCATED IN PLANT EXHAUST
		STACK FOR AFTERBURNER EXHAUST AND PLANT AIR DUCTING (ONE HCN MONITOR
		- ACOVING BOTH LINE 24 ID/O 21807LAND LINE 32 IP/O 23608U
	KI.	WASTE HEAT RECOVERY BOILER, 2.4 MMBTU/HR, VENTED TO APC BAGHOUSE (P/O
	IV.	19659)]
		1auaajj

# SUBJECT TO THE FOLLOWING CONDITIONS:

#### GENERAL

1. THE EQUIPMENT SHALL BE PROPERLY MAINTAINED.

DATE ISSUED:

02-26-2009

DATE EXPIRES: 10-24-2009 (UNLESS RENEWED)

LARRY GREENE

AIR POLLUTION CONTROL OFFICER

REVOCABLE AND NON-TRANSFERABLE

PAGE 1 OF 5 PAGES

- 2. THE AIR POLLUTION CONTROL OFFICER AND/OR AUTHORIZED REPRESENTATIVES, UPON THE PRESENTATION OF CREDENTIALS, SHALL BE PERMITTED:
  - A. TO ENTER UPON THE PREMISES WHERE THE SOURCE IS LOCATED OR IN WHICH ANY RECORDS ARE REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
  - B. AT REASONABLE TIMES TO HAVE ACCESS TO AND COPY ANY RECORDS REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
  - C. TO INSPECT ANY EQUIPMENT, OPERATION, OR METHOD REQUIRED IN THIS PERMIT TO OPERATE, AND
  - D. TO SAMPLE EMISSIONS FROM THE SOURCE OR REQUIRE SAMPLES TO BE TAKEN.
- 3. THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26, PART 4, CHAPTER 3, OF THE CALIFORNIA HEALTH AND SAFETY CODE OR THE RULES AND REGULATIONS OF THE AIR QUALITY MANAGEMENT DISTRICT.
- 4. A LEGIBLE COPY OF THIS PERMIT SHALL BE MAINTAINED ON THE PREMISES WITH THE EQUIPMENT.
- 5. THIS SOURCE SHALL NOT DISCHARGE INTO THE ATMOSPHERE ANY AIR CONTAMINANT THAT CONSTITUTES A PUBLIC NUISANCE.

#### **EMISSIONS LIMITATIONS**

- 6. THE GRAPHITE FIBER MANUFACTURING PROCESS SHALL NOT DISCHARGE INTO THE ATMOSPHERE ANY VISIBLE AIR CONTAMINANTS OTHER THAN UNCOMBINED WATER VAPOR, FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR, WHICH ARE AS DARK OR DARKER THAN RINGELMANN NO. 1 OR EQUIVALENT TO OR GREATER THAN 20% OPACITY.
- 7. THE COMBINED TOTAL HOURLY EMISSIONS FROM THE GRAPHITE FIBER MANUFACTURING PROCESS LINES 31 AND 32 SHALL NOT EXCEED THE FOLLOWING LIMITS AVERAGED OVER A THREE-HOUR PERIOD:

POLLUTANT	LHE FOL <mark>TO</mark> ANIVE FIRMIT 2 Y	PROCESS LINES 31 & 32 COMBIN MAXIMUM ALLOWABLE EMISSIO LB/HOUR (BASED ON 3-HOUR AVER	NS
joesovani	MAIN STACK	FUGITIVE EXHAUST	TOTAL
	3.32	0.02	
NO <sub>x</sub>	5.74	N/A	
			5.994
SO <sub>X</sub> (A)	5.2	N/A	5.2
PM.º	21.0	N/A	21.0

(A) THE SO<sub>X</sub> EMISSION FACTOR IS BASED ON THE COMBINED SO<sub>X</sub> EMISSIONS GENERATED FROM THE COMBUSTION PRODUCT OF THE FOUR AFTERBURNERS, WHICH IS BASED ON A COMBINED HEAT INPUT RATE OF 23.16 MMBTU/HR AND NATURAL GAS SO<sub>X</sub> EMISSION FACTOR OF 0.0006 LB/MMBTU, TABLE 1.4-1 OF AP-42, AND THE MANUFACTURING PROCESS, WHICH IS BASED ON 20 PPMV AND 31,000 SCFM.

8. THE COMBINED TOTAL QUARTERLY EMISSIONS FROM THE GRAPHITE FIBER MANUFACTURING PROCESS LINES 31 AND 32 SHALL NOT EXCEED THE FOLLOWING LIMITS:

POLLUTANT .	PROCESS LINES 31 & 32 COMBINED  MAXIMUM ALLOWABLE EMISSIONS  LB/QUARTER			
	1 <sup>ST</sup> QUARTER	2 <sup>NO</sup> QUARTER	3 <sup>RD</sup> QUARTER	4 <sup>TH</sup> QUARTER
ROC	7,214	7,295	7,375	7,375
NO <sub>x</sub>	12,398	12,536	12.674	12.674
SO <sub>x</sub>	12,947	13,091	13,235	13,235
PM <sub>10</sub>	11,232	11,357	11,482	11,482
 CO	45,360	45.864	46,368	46,368

9. HYDROGEN CYANIDE (HCN) EMISSION CONCENTRATION FROM THE PLANT EXHAUST, AS MEASURED BY THE PRIMARY CONTINUOUS HCN EMISSION MONITOR, SHALL NOT EXCEED THE FOLLOWING LIMIT:

PRIMARY CONTINUOUS HCM EMISSION	MOINTOK BUYER HOT FYOR	, L D 771, L 1 C L L 1 - 7.7.1.		 _ `	
		IUM ALLOWABLE EMI			
POLLUTANT	CO	NCENTRATION, PPM	(A)		
HCN		95			
11014			·— —	 	

(A) CONCENTRATION AVERAGED OVER A PERIOD OF 15 MINUTES AS SHOWN ON THE MONITOR'S STRIP CHART (OPERATING AT A STRIP CHART SPEED OF 20 MM/HOUR OR GREATER).

#### **EQUIPMENT OPERATION**

10. THE PRECURSOR PROCESSING RATE FOR THE GRAPHITE FIBER MANUFACTURING PROCESS LINES 31 AND 32 SHALL BE LIMITED TO THE PRECURSOR PROCESSING RATE DIVIDED BY 0.9 THAT THE GRAPHIC FIBER MANUFACTURING PROCESS LINES WERE OPERATING AT DURING THE MOST RECENT COMPLIANCE SOURCE TEST WHERE COMPLIANCE WITH THE ROC, NO<sub>X</sub>, PM<sub>10</sub> AND CO EMISSION RATES OUTLINED IN CONDITION NO. 6 WAS DEMONSTRATED. THE PRECURSOR PROCESSING RATE SHALL BE DETERMINED AS FOLLOWS:

PRECURSOR PROCESS RATE = LINE SPEED \* Σ [NUMBER OF FILAMENTS \* DECITEX \* NUMBER OF ENDS] \* E-07

- 11. THE LINE SPEED METER AND ASSOCIATED CHART RECORDER SHALL BE MAINTAINED TO MONITOR AND RECORD PRECURSOR PROCESS RATES WHEN THE PROCESS IS IN OPERATION. IN THE EVENT OF A CHART RECORDER FAILURE, MANUAL HOURLY LINE SPEED RECORDKEEPING IS ALLOWED. MANUAL RECORKEEPING SHALL NOT EXCEED 5 TIME PERIODS PER CALENDAR YEAR AND EACH PERIOD SHALL NOT EXCEED 24 HOURS.
- 12. THE PRIMARY CONTINUOUS HCN EMISSION MONITOR SHALL BE OPERATED WHENEVER THE PROCESS IS IN OPERATION. THE HCN MONITOR SHALL BE MAINTAINED AND CALIBRATED. GRAFIL SHALL FOLLOW THE HCN MONITOR MAINTENANCE AND CALIBRATION SCHEDULE, AS PER ATTACHMENT 'A', APPROVED BY THE AIR POLLUTION CONTROL OFFICER.
- 13. THE OXIDATION OVENS, LT FURNACE, HT FURNACE IN THE GRAPHITE FIBER MANUFACTURING PROCESS LINE 31 SHALL NOT PROCESS FIBER UNLESS THE EXHAUST AND THE FUGITIVE EMISSION GENERATED DURING PROCESS UPSET, INCLUDING START UP. ARE VENTED TO APC AFTERBURNER #1 (P/O 11425) AND APC AFTEBURNER #2 (P/O 15841), RESPECTIVELY, WHICH ARE IN COMPLIANCE WITH ALL LISTED PERMIT CONDITIONS.
- 14. THE EXHAUST FROM APC AFTERBURNER #2 (P/O 15841) SHALL BE VENTED TO APC BAGHOUSE #1 (P/O 15840).
- 15. THE OXIDATION OVENS, LT FURNACE, HT FURNACE IN THE GRAPHITE FIBER MANUFACTURING PROCESS LINE 32 SHALL NOT PROCESS FIBER UNLESS THE EXHAUST AND THE FUGITIVE EMISSION GENERATED DURING PROCESS UPSET, INCLUDING START UP. ARE VENTED TO APC AFTERBURNER #3 (P/O 11426) AND APC AFTEBURNER #4 (P/O 18279), RESPECTIVELY, WHICH ARE IN COMPLIANCE WITH ALL LISTED PERMIT CONDITIONS.

16. THE EXHAUST FROM APC AFTERBURNER #4 (P/O 18279) SHALL BE VENTED TO APC BAGHOUSE #2 (P/O 19659).

#### RECORDKEEPING

17. THE FOLLOWING RECORDS SHALL BE CONTINUOUSLY MAINTAINED ON-SITE FOR THE MOST RECENT FIVE-YEAR PERIOD AND SHALL BE MADE AVAILABLE TO THE AIR POLLUTION CONTROL OFFICER UPON REQUEST. MONTHLY RECORDS AS SPECIFIED IN THE TABLE BELOW SHALL BE MADE AVAILABLE FOR INSPECTION WITHIN 30 DAYS FOLLOWING THE MONTH.

FOLLOWING THE MON	TH
FREQUENCY	INFORMATION TO BE RECORDED
WHEN OPERATED	A. THE MAXIMUM PRECURSOR PROCESS RATE ALLOWED CALCULATED PURSUANT TO
	CONDITION NO. 10.  B. THE PRODUCTION DATA FOR EACH PRODUCTION RUN SHALL INCLUDE THE FOLLOWING:  1) WEIGHT OF PRECURSOR PROCESSED (KG/HR)  2) LINE SPEED (M/HR)
	3) NUMBER AND TYPE (DECITEX OF ENDS PROCESSED) 4) NUMBER OF FILAMENTS 5) START AND END DATES AND TIME 6) CONTINUOUS HON CONCENTRATION AT TE PLANT EXHAUST STACK (PPM)
MONTHLY	C. HCN MONITOR MAINTENANCE ACTIVITY LOG
MOLLINE	

NOTE: GRAFIL SHALL FOLLOW A RECORDKEEPING FORMAT APPROVED BY THE AIR POLLUTION CONTROL OFFICER.

18. ALL SOURCE TEST REPORTS SHALL BE CONTINUOUSLY MAINTAINED ON-SITE FOR THE MOST RECENT FIVE-YEAR PERIOD AND SHALL BE MADE AVAILABLE TO THE AIR POLLUTION CONTROL OFFICER UPON REQUEST.

#### REPORTING

- 19. THE AIR POLLUTION CONTROL OFFICER SHALL BE NOTIFIED WITHIN 8 HOURS OF DETERMINING THAT THE PRIMARY CONTINUOUS HON EMISSON MONITOR INDICATES HON CONCENTRATIONS IN EXCESS OF 95 PPM, AVERAGED OVER A PERIOD OF ONE HOUR AS SHOWN ON THE MONITOR'S STRIP CHART (OPERATING AT A STRIP CHART SPEED OF 20 MM/HR OR GREATER). A WRITTEN FOLLOW-UP REPORT SHALL BE SUBMITTED WITHIN 7 DAYS TO THE AIR POLLUTION CONTROL OFFICER. THE REPORT SHALL INCLUDE THE DATE, TIME AND PPM READING OF THE EXCESS HON CONCENTRATION AND ANY SHUT DOWN PROCEDURES IMPLEMENTED.
- 20. NOTIFY THE AIR POLLUTION CONTROL OFFICER OF ANY MALFUNCTIONS OR BREAKDOWN OF THE AIR POLLUTION CONTROL EQUIPMENT AS REQUIRED BY RULE 602 -- BREAKDOWN CONDITIONS: EMERGENCY VARIANCE.

#### **EMISSIONS TESTING**

- 21. AN EMISSION TEST FOR HCN, ROC, NOX, SOX, PM10 AND CO SHALL BE CONDUCTED ANNUALLY. THE TEST SHALL CONFORM TO THE FOLLOWING TEST CONDITION AND TIME SCHEDULE:
  - A. THE PRECURSOR PROCESS RATE STATED IN CONDITION NO. 10 WILL NOT BE IN EFFECT FOR THE ANNUAL EMISSION TEST. HOWEVER, THE PRECURSOR PROCESS RATE UTILIZED DURING THE ANNUAL EMISSION TEST WILL ESTABLISH THE MAXIMUM ALLOWABLE PRECURSOR PROCESS RATE FOR THE FOLLOWING YEAR AS STATED IN CONDITION NO. 10.
  - B. A PRE-TEST PLAN OUTLINING THE TEST METHODS AND OPERATING PARAMETERS SHALL BE SUBMITTED FOR DISTRICT APPROVAL AT LEAST 30 DAYS PRIOR TO THE PROPOSED TEST DATE.
  - C. THE DISTRICT SHALL BE GIVEN AT LEAST 7 DAYS NOTICE OF THE ACTUAL TIME AND DATE OF EACH TEST SO THAT A DISTRICT REPRESENTATIVE MAY OBSERVE THE TEST.
  - D. THE RESULTS OF EACH TEST SHALL BE SUBMITTED TO THE DISTRICT NO LATER THAN 60 DAYS FOLLOWING EACH TEST.
- 22. THE AIR POLLUTION CONTROL OFFICER MAY WAIVES ALL OR ANY PORTION OF THE ANNUAL SOURCE TEST REQUIREMENT IF, IN THE AIR POLLUTION CONTROL OFFICER'S SOLE JUDGEMENT, PRIOR TEST RESULTS INDICATE AN ADEQUATE MARGIN OF COMPLIANCE HAS BEEN MAINTAINED.

#### **EMISSION REDUCTION CREDITS**

23. GRAFIL HAS SUBMITTED THE FOLLOWING NO<sub>X</sub> EMISSION REDUCTION CREDITS TO OFFSET EMISSIONS INCREASES EXCEEDING THE NOV OFFSET THRESHOLD:

EXCEEDING THE NOx	OFFSET THRESHOL	<u>.D:</u>	·— 7		· <del>-</del> · !
EMISSION REDUCTION	1 <sup>ST</sup> QUARTER LB/QUARTER	2 <sup>ND</sup> QUARTER LB/QUARTER	3 <sup>RD</sup> QUARTER LB/QUARTER	4 <sup>TH</sup> QUARTER LB/QUARTER	TOTAL LB/YEAR
CREDIT			<del> </del>		· — ·— —
ERC #00-00661 (BLUE DIAMOND BIOMASS BOILER	6,718	6,631	6,536	7,187	27.072
SHUTDOWN)	<u> </u>		<u> </u>	<u></u>	! · '

24. GRAFIL HAS SUBMITTED THE FOLLOWING PM10 EMISSION REDUCTION CREDITS TO OFFSET EMISSIONS INCREASES

EXCEEDING THE PM. DOFFSET THRESHOLD:						
	EMISSION REDUCTION CREDIT	1 <sup>S1</sup> QUARTER LB/QUARTER	2 <sup>ND</sup> QUARTER LB/QUARTER	3 <sup>RD</sup> QUARTER LB/QUARTER	4 <sup>IH</sup> QUARTER LB/QUARTER	LBYEAR
	ERC #93-2-03BT (FEATHER RIVER AQMD)	5,090	5,200	5,100	5,160	20,550
	ERC #94-4-03BT (FEATHER RIVER AQMD)	1,560	1,520	1,610	1.640	6.330
	L. ————	J	1	_		

YOUR APPLICATION FOR THIS AIR QUALITY PERMIT TO OPERATE WAS EVALUATED FOR COMPLIANCE WITH SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT (SMAQMD), STATE AND FEDERAL AIR QUALITY RULES. THE FOLLOWING LISTED RULES ARE THOSE THAT ARE MOST APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT, OTHER RULES MAY ALSO BE APPLICABLE.

AOMD RULE NO.	<u>RULE TITLE</u>
201	GENERAL PERMIT REQUIREMENTS
202	NEW SOURCE REVIEW
301	STATIONARY SOURCE PERMIT FEES
401	RINGELMANN CHART
	10 HOLDON

NUISANCE 402

SPECIFIC CONTAMINANTS 406

SULFUR CONTENT OF FUELS 420

IN ADDITION, THE CONDITIONS ON THIS PERMIT TO OPERATE MAY REFLECT SOME, BUT NOT ALL, REQUIREMENTS OF THESE RULES. THERE MAY BE OTHER CONDITIONS THAT ARE APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. FUTURE CHANGES IN PROHIBITORY RULES MAY ESTABLISH MORE STRINGENT REQUIREMENTS WHICH MAY SUPERSEDE THE CONDITIONS LISTED HERE.

FOR FURTHER INFORMATION PLEASE CONSULT YOUR SMAQMD RULEBOOK OR CONTACT THE SMAQMD FOR ASSISTANCE.

PAGE 5 OF 5 PAGES



# PERMIT

IS HEREBY GRANTED TO

GRAFIL INC. 5900 88TH STREET SACRAMENTO, CA 95828

EQUIPMENT LOCATION: 5900 88TH STREET, SACRAMENTO

TO OPERATE

#### AIR POLLUTION CONTROL SYSTEM #3 CONSISTING OF:

- APC AFTERBURNER #3, JOHN ZINK THERMAL OXIDIZER, MAXIMUM RATING OF 9.18 MMBTU/HR. 1.
- EXHAUST SYSTEM VENTING OXIDATION OVENS AND HT FURNACE FROM GRAPHITE FIBER MFG PROCESS LINE 32 (PO 11429).

#### SUBJECT TO THE FOLLOWING CONDITIONS

#### GENERAL

- OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
- THE EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
- NOTIFY THE AIR POLLUTION CONTROL OFFICER OF ANY MALFUNCTIONS OR BREAKDOWN OF THE AIR POLLUTION CONTROL EQUIPMENT AS REQUIRED BY RULE 602 - BREAKDOWN CONDITIONS; EMERGENCY VARIANCE.

#### **EQUIPMENT OPERATION**

- A MINIMUM TEMPERATURE OF 750° C, AVERAGED OVER A ONE HOUR PERIOD, SHALL BE MAINTAINED IN THE COMBUSTION ZONE OF THE AFTERBURNER WHEN THE TEMPERATURE OF THE OXIDATION OVENS IS AT 205° C OR GREATER
- THE TEMPERATURE GAUGE AND ASSOCIATED CHART RECORDER FOR THE AFTERBURNER SHALL BE MAINTAINED TO MONITOR AND RECORD THE TEMPERATURE WHEN THE PROCESS IS IN OPERATION. IN THE EVENT OF A CHART RECORDER FAILURE, MANUAL HOURLY TEMPERATURE RECORD KEEPING IS ALLOWED. MANUAL RECORD KEEPING SHALL NOT EXCEED 5 TIME PERIODS PER CALENDAR YEAR AND EACH PERIOD SHALL NOT EXCEED 24 HOURS.

#### RECORD KEEPING

RECORD OF THE AFTERBURNER TEMPERATURE SHALL BE CONTINUOUSLY MAINTAINED FOR THE MOST RECENT 3 YEAR PERIOD AND SHALL BE MADE AVAILABLE TO THE AIR POLLUTION CONTROL OFFICER UPON REQUEST.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26, CHAPTER 3, OF THE HEALTH AND SAFETY CODES OF THE STATE OF CALIFORNIA OR THE RULES AND REGULATIONS OF THE AIR QUALITY MANAGEMENT DISTRICT.

DATE: EXPIRES 10-24-96 UNLESS RENEWED

**PERMIT NO. 11426** 

PAGE 1 OF 1 PAGE(S)

NORMAN D. COVELL AIR POLLUTION CONTROL OFFICER

REVOCABLE AND NON-TRANSFERRABLE

SACRAMENTO METROPOLITAN



# PERMIT TO OPERATE

#### **GRAFIL INC.**

**EQUIPMENT LOCATION:** 

5900 88TH STREET, SACRAMENTO, CA 95828

PERMIT NO.

#### **EQUIPMENT DESCRIPTION**

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

APC AFTERBURNER #4, ZEECO, 2.4 MMBTU/HR HEAT INPUT RATING

EXHAUST SYSTEM VENTING LOW TEMPERATURE FURNACE AND HIGH 18279

TEMPERATURE FURNACE OF THE GRAPHITE FIBER MANUFACTURING

**PROCESS LINE 32 (A/C 19221)** 

#### SUBJECT TO THE FOLLOWING CONDITIONS:

#### **GENERAL**

- 1. THE EQUIPMENT SHALL BE PROPERLY MAINTAINED.
- 2. THE AIR POLLUTION CONTROL OFFICER AND/OR AUTHORIZED REPRESENTATIVES, UPON THE PRESENTATION OF CREDENTIALS, SHALL BE PERMITTED:
  - A. TO ENTER UPON THE PREMISES WHERE THE SOURCE IS LOCATED OR IN WHICH ANY RECORDS ARE REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
  - B. AT REASONABLE TIMES TO HAVE ACCESS TO AND COPY ANY RECORDS REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
  - C. TO INSPECT ANY EQUIPMENT, OPERATION, OR METHOD REQUIRED IN THIS PERMIT TO OPERATE, AND
  - D. TO SAMPLE EMISSIONS FROM THE SOURCE OR REQUIRE SAMPLES TO BE TAKEN.
- 3. THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26, PART 4, CHAPTER 3, OF THE CALIFORNIA HEALTH AND SAFETY CODE OR THE RULES AND REGULATIONS OF THE AIR QUALITY MANAGEMENT DISTRICT.
- 4. A LEGIBLE COPY OF THIS PERMIT SHALL BE MAINTAINED ON THE PREMISES WITH THE EQUIPMENT.

#### **EMISSIONS LIMITATIONS**

5. THE GRAPHITE FIBER MANUFACTURING PROCESS SHALL NOT DISCHARGE INTO THE ATMOSPHERE ANY VISIBLE AIR CONTAMINANTS OTHER THAN UNCOMBINED WATER VAPOR, FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR, WHICH ARE AS DARK OR DARKER THAN RINGELMANN NO. 1 OR EQUIVALENT TO OR GREATER THAN 20% OPACITY.

LARRY GREENE

DATE ISSUED:

09-22-2006

PAGE 1 OF 2 PAGES

DATE EXPIRES: 10-24-2007 (UNLESS RENEWED)

AIR POLLUTION CONTROL OFFICER

**PERMIT NO.: 19279** 

**REVOCABLE AND NON-TRANSFERABLE** 

6. EMISSIONS FROM THE APC AFTERBURNER #4 ARE INCLUDED IN THE COMBINED EMISSIONS FROM THE GRAPHITE FIBER MANUFACTURING PROCESS LINE 32.

#### **EQUIPMENT OPERATION**

7. THE APC AFTERBURNER #4 SHALL BE OPERATED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

#### RECORDKEEPING

8. NONE.

YOUR APPLICATION FOR THIS AIR QUALITY PERMIT TO OPERATE WAS EVALUATED FOR COMPLIANCE WITH SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT (SMAQMD), STATE AND FEDERAL AIR QUALITY RULES. THE FOLLOWING LISTED RULES ARE THOSE THAT ARE MOST APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. OTHER RULES MAY ALSO BE APPLICABLE.

AQMD RULE NO.	RULE TITLE
201	GENERAL PERMIT REQUIREMENTS
202	NEW SOURCE REVIEW
401	RINGELMANN CHART
406	SPECIFIC CONTAMINANTS

IN ADDITION, THE CONDITIONS ON THIS PERMIT TO OPERATE MAY REFLECT SOME, BUT NOT ALL, REQUIREMENTS OF THESE RULES. THERE MAY BE OTHER CONDITIONS THAT ARE APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. FUTURE CHANGES IN PROHIBITORY RULES MAY ESTABLISH MORE STRINGENT REQUIREMENTS WHICH MAY SUPERSEDE THE CONDITIONS LISTED HERE.

FOR FURTHER INFORMATION PLEASE CONSULT YOUR SMAQMD RULEBOOK OR CONTACT THE SMAQMD FOR ASSISTANCE.



# PERMIT TO OPERATE

ISSUED TO:

**GRAFIL INC.** 

EQUIPMENT LOCATION:

5900 88TH STREET, SACRAMENTO, CA 95828

PERMIT NO.	EQUIPMENT DESCRIPTION	
1 121 (1011)	L SOMETRICATION & ENGINEERING MODEL 120 JMCE 100-T.	
19659	APC BAGHOUSE, JM CONSTRUCTION & ENGINEERING, MODEL 120 JMCE 100-T, PULSE JET, 1,584 SQ. FT. CLOTH FILTER AREA, 1500 CFM AIR FLOW RATE,	
	SERVES GRAPHITE FIBER MANUFACTURING PROCESS LINE 32	

# SUBJECT TO THE FOLLOWING CONDITIONS:

#### **GENERAL**

- 1. THE EQUIPMENT SHALL BE PROPERLY MAINTAINED.
- THE AIR POLLUTION CONTROL OFFICER AND/OR AUTHORIZED REPRESENTATIVES, UPON THE PRESENTATION OF CREDENTIALS SHALL BE PERMITTED:
  - A. TO ENTER UPON THE PREMISES WHERE THE SOURCE IS LOCATED OR IN WHICH ANY RECORDS ARE REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
  - B. AT REASONABLE TIMES TO HAVE ACCESS TO AND COPY ANY RECORDS REQUIRED TO BE KEPT UNDER TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
  - C. TO INSPECT ANY EQUIPMENT, OPERATION, OR METHOD REQUIRED IN THIS PERMIT TO OPERATE, AND
  - D. TO SAMPLE EMISSIONS FROM THE SOURCE OR REQUIRE SAMPLES TO BE TAKEN.
- 3. THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26, PART 4, CHAPTER 3, OF THE CALIFORNIA HEALTH AND SAFETY CODE OR THE RULES AND REGULATIONS OF THE AIR QUALITY MANAGEMENT DISTRICT.
- 4. A LEGIBLE COPY OF THIS PERMIT SHALL BE MAINTAINED ON THE PREMISES WITH THE EQUIPMENT.

DATE ISSUED:

12-01-2006

DATE EXPIRES:

07-24-2007 (UNLESS RENEWED)

LARRY GREENE

AIR POLLUTION CONTROL OFFICER

**PERMIT NO.: 19659** 

PAGE 1 OF 3 PAGES

**REVOCABLE AND NON-TRANSFERABLE** 

#### **EMISSIONS LIMITATIONS**

- 5. THE APC BAGHOUSE SHALL NOT DISCHARGE INTO THE ATMOSPHERE ANY VISIBLE AIR CONTAMINANTS OTHER THAN UNCOMBINED WATER VAPOR, FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR, WHICH ARE AS DARK OR DARKER THAN RINGELMANN NO. 1 OR EQUIVALENT TO OR GREATER THAN 20% OPACITY.
- 6. PM EMISSIONS FROM THE MAIN STACK SHALL NOT EXCEED 0.1 GRAINS/DSCF CORRECTED TO 12% CO<sub>2</sub>
- 7. PM 10 EMISSIONS FROM THE MAIN STACK SHALL NOT EXCEED THE FOLLOWING:

POLLUTANT	MAXIMUM ALLOWABLE EMISSIONS			
	LB/HR (A)	LB/QTR (B)		
PM10	3.2	7066		

(A) A 3-HOUR AVERAGE SHALL BE USED TO DETERMINE THE HOURLY RATE.

(b) QUARTERLY EMISSIONS BASED ON THE HOURLY LIMIT, 24 HOURS/DAY AND 92 DAYS/QUARTER.

#### **EQUIPMENT OPERATION**

- 8. EACH BAGHOUSE SHALL OPERATE CONTINUOUSLY WHENEVER THE GRAPHITE LINE THEY SERVE IS IN OPERATION. EACH BAGHOUSE IS ALLOWED UP TO 5 MINUTES OF NON-SIMULTANEOUS BYPASS OPERATION. BYPASS OCCURS WHEN THE EMISSIONS FROM A FIBER LINE IS EMITTED DIRECTLY INTO THE MAIN EXHAUST FAN.
- 9. BAGHOUSE DISCHARGE OF COLLECTED MATERIAL SHALL BE INTO A COVERED CONTAINER AND ANY TRANSFER OF THIS MATERIAL SHALL BE PERFORMED IN A MANNER PREVENTING FUGITIVE EMISSION.

#### RECORDKEEPING

10. THE FOLLOWING RECORD SHALL BE CONTINUOUSLY MAINTAINED ON SITE FOR THE MOST RECENT THREE-YEAR PERIOD AND SHALL BE MADE AVAILABLE TO THE AIR POLLUTION CONTROL OFFICER UPON REQUEST.

FREQUENCY	INFORMATION TO BE RECORDED
AT ALL TIMES	THE DATE, START TIME AND END TIME OF THE OPERATION OF EACH BAGHOUSE BYPASS SYSTEM SHALL BE RECORDED.

(916) 874-4800 FAX (916) 874-4899

# SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

YOUR APPLICATION FOR THIS AIR QUALITY PERMIT TO OPERATE WAS EVALUATED FOR COMPLIANCE WITH SACRAMENTO AIR QUALITY MANAGEMENT DISTRICT (AQMD), STATE AND FEDERAL AIR QUALITY RULES. THE FOLLOWING LISTED RULES ARE THOSE THAT ARE MOST APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. OTHER RULES MAY ALSO BE APPLICABLE.

AQMD RULE NO.	RULE TITLE
201	GENERAL PERMIT REQUIREMENTS
202	NEW SOURCE REVIEW
401	RINGELMANN CHART
404	PARTICULATE MATTER

IN ADDITION, THE CONDITIONS ON THIS PERMIT TO OPERATE MAY REFLECT SOME, BUT NOT ALL, REQUIREMENTS OF THESE RULES. THERE MAY BE OTHER CONDITIONS THAT ARE APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. FUTURE CHANGES IN PROHIBITORY RULES MAY ESTABLISH MORE STRINGENT REQUIREMENTS WHICH MAY SUPERSEDE THE CONDITIONS LISTED HERE.

FOR FURTHER INFORMATION PLEASE CONSULT YOUR AQMD RULEBOOK OR CONTACT THE AQMD FOR ASSISTANCE.

PAGE 3 OF 3 PAGES

MANAGEMENT DISTRICT

**AUTHORITY TO CONSTRUCT** 

A/C NO.:

23363

ISSUED BY:

**DATE ISSUED:** 

JUNE 5, 2012

DATE EXPIRES:

JUNE 5, 2014

**ISSUED TO:** 

GRAFIL INC.

LOCATION:

5900 88TH STREET, SACRAMENTO, CA 95828

**DESCRIPTION:** 

MODIFICATION OF FUEL USAGE LIMITATION:

BOILER, CLEAVER BROOKS, MODEL 4WI-700-100-150, SERIAL NO. OL106305, 4.8 MMBTU/HR HEAT INPUT RATING, NATURAL GAS-FIRED, APPLICATION:

INDUSTRIAL PROCESS

#### **AUTHORITY TO CONSTRUCT CONDITIONS**

#### START-UP REQUIREMENTS

S1. Upon acceptance of the conditions authorized in this Authority to Construct, the owner/operator shall contact the Sacramento Metropolitan Air Quality Management District (SMAQMD) at (916)874-4858 to arrange for an initial inspection.

[Basis: SMAQMD Rule 201, Section 405]

- S2. This Authority to Construct/Operate shall serve as a temporary Permit to Operate provided that:
  - A. The SMAQMD has been notified to conduct an initial inspection,
  - B. The equipment installed matches the equipment authorized in this Authority to Construct, and
  - C. The equipment is operated in compliance with all conditions listed within this Authority to Construct.

[Basis: SMAQMD Rule 201, Section 405]

#### GENERAL

1. The equipment shall be properly maintained and operated in accordance with the manufacturer's recommendations at all times.

[Basis: SMAQMD Rule 201, Section 405]

- 2. The Air Pollution Control Officer and/or authorized representatives, upon the presentation of credentials, shall be permitted:
  - A. To enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this Authority to Construct, and
  - B. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct, and

#### MANAGEMENT DISTRICT

## **AUTHORITY TO CONSTRUCT**

(CONTINUED)

- C. To inspect any equipment, operation, or method required in this Authority to Construct, and
- D. To sample emissions from the source or require samples to be taken.

[Basis: SMAQMD Rule 201, Section 405]

3. This Authority to Construct does not authorize the emission of air contaminants in excess of those allowed by Division 26, Part 4, Chapter 3, of the California Health and Safety Code or the Rules and Regulations of the Sacramento Metropolitan Air Quality Management District.

[Basis: SMAQMD Rule 201, Section 405]

4. The equipment shall not discharge such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

[Basis: SMAQMD Rule 402, Section 301]

5. A legible copy of this Authority to Construct shall be maintained on the premises with the equipment. [Basis: SMAQMD Rule 201, Section 401]

#### **EMISSION LIMITATIONS**

6. The equipment shall not discharge into the atmosphere any visible air contaminants other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour, which are as dark or darker than Ringelmann No. 1 or equivalent to or greater than 20% opacity.

[Basis: SMAQMD Rule 401, Section 301]

- 7. The boiler, when burning natural gas, shall not emit:
  - A. Nitrogen Oxides (NOx) in excess of 9 ppmvd corrected to 3% Oxygen.
  - B. Carbon Monoxide (CO) in excess of 100 ppmvd corrected to 3% Oxygen

[Basis: SMAQMD Rule 202, Section 410.2 and Rule 411, Section 301]

8. Emissions from the boiler shall not exceed the following limits:

[Basis: SMAQMD Rule 202, Section 410.2 and Rule 411, Sections 301]

Dellutant	Emission Factors	Maximum Allowable Emissions (B)		
Pollutant	(A) (Ib/mmcf)	(lb/day)	(lb/quarter)	(lb/year)
VOC	5.5	0.6	21	86
NOx	10.9	1.3	43	170
SOx	0.6	0.1	2	9
PM10	7.6	0.9	30	119

MANAGEMENT DISTRICT

### **AUTHORITY TO CONSTRUCT**

(CONTINUED)

Pollutant	Emission Factors Maximum Allowable Emissions (B)			ons (B)
Poliutant	(A) (lb/mmcf)	(lb/day)	(lb/quarter)	(lb/year)
PM2.5	7.6	0.9	30	119
CO	74	8.5	289	1,154
GHG	117,000	6.7 tons/day	228 tons/quarter	913 tons/year

- (A) Emission factors for VOC, SOx, PM10 and PM2.5 are from AP-42, Table 1.4-1 ~ 1.4-2, Emission Factors from Natural Gas Combustion, pg 1.4-5 ~ 1.4-6 (7/98). Emission factors for NOx and CO are based on 9 ppmvd @ 3% O<sub>2</sub> and 100 ppmvd @ 3% O<sub>2</sub>, respectively. Emission factor for PM2.5 is the PM10 factor assuming all PM10 to be PM2.5. GHG emission factor is expressed as CO<sub>2</sub>e and is from EPA's Mandatory Reporting of Greenhouse Gases Rule (74 FR 56260), Tables C-1 & C-2.
- (B) Emissions are based on operating at maximum capacity of 0.0048 mmcf/hour, 24 hours/day, 3.9 mmcf/quarter, 15.6 mmcf/year and the emission factors in this table.

#### **EQUIPMENT OPERATION**

9. The boiler shall be fired only on pipeline-quality natural gas.

[Basis: SMAQMD Rule 201, Section 405]

10. The boiler shall be equipped with a non-resetting totalizing fuel meter to ensure compliance with the Condition Nos.8 and 11. The totalizing function of the meter shall have the ability to read up to at least 100 million cubic feet of natural gas before rolling over.

[Basis: SMAQMD Rule 201, Section 405]

11. Natural gas fuel usage for the boiler shall not exceed the following limit:

[Basis: SMAQMD Rule 201, Section 405]

Fuel Type	Fuel Meter Type	Maximum Allowable Fuel Usage (cf/quarter)
Natural Gas	Pressure- and Temperature-Compensated	3,900,000 (A)

(A) This limit is based on a pressure- and temperature-compensated fuel meter. However, if the actual fuel meter installed is different from that described above, the source must submit to the SMAQMD the natural gas delivery line pressure (in inches H<sub>2</sub>O or psig) from PG&E in order to determine the appropriate meter adjustment factor.

MANAGEMENT DISTRICT

## **AUTHORITY TO CONSTRUCT**

(CONTINUED)

#### **EMISSIONS TESTING**

- 12. Emissions of nitrogen oxides, carbon monoxide and oxygen shall be tested within 60 days of modified operation to verify compliance with Condition No. 7.
  - A. Submit a source test plan to the Air Pollution Control Officer for approval at least 30 days before the source test is to be performed.
  - B. Notify the Air Pollution Control Officer at least 7 days prior to the source test date of the exact date and time of the test if the date has changed from that approved in the source test plan.
  - C. During source testing, the boiler shall be operated at a firing rate that is as close as physically possible to the rated capacity.
  - D. Submit the source test report to the Air Pollution Control Officer within 60 days from the completion of the test(s).

[Basis: SMAQMD Rule 201, Section 303.2 and Rule 411, Section 501.1]

- 13. Emission testing methods shall be those specified in Rule 411, Section 501 Boiler NOx.
  - A. Oxides of Nitrogen ARB Method 100 or EPA Method 7E
  - B. Carbon Monoxide ARB Method 100 or EPA Method 10
  - C. Stack Gas Oxygen ARB Method 100 or EPA Method 3A
  - D. Carbon Dioxide ARB Method 100 or EPA Method 3A

[Basis: SMAQMD Rule 411, Section 501]

- 14. As an alternative to source testing requirement as specified in Condition Nos. 12 and 13, emissions testing may be performed using a portable analyzer provided compliance with the following:
  - A. Notify the Air Pollution Control Officer at least 30 days prior to the test date of the date and time of the test.
  - B. Equipment and testing must comply with Rule 411, Section 404 and Rule 411 Attachment B.
  - C. If the results from the portable analyzer show that NOx emissions exceed the limits in Condition No. 7, the boiler shall be source tested no later than 60 days from the date of discovery of the exceedance.

[Basis: SMAQMD Rule 411, Section 403.4]

**MANAGEMENT DISTRICT** 

# **AUTHORITY TO CONSTRUCT**

(CONTINUED)

#### **EMISSION OFFSETS**

15. Grafil Inc. shall provide sufficient emission reduction credits (ERC) in accordance with Condition Nos. 16 and 17 to fully offset the following VOC, NOx, PM10 and PM2.5 emissions.

[SMAQMD Rule 202, Section 302.1]

		Emission Reduction Credits				
Permit No	Pollutant	1 <sup>st</sup> Quarter (lb/quarter)	2 <sup>nd</sup> Quarter (lb/quarter)	3 <sup>rd</sup> Quarter (lb/quarter)	4 <sup>th</sup> Quarter (lb/quarter	Total (lb/year)
P/O 20835	VOC	10	10	10	10	40
Boiler	PM10	14	14	14	14	56
(4.8 MMBtu/hr)	PM2.5	14	14	14	14	56
	VOC	11	11	11	11	44
A/C 23363	NOx	22	22	22	22	88
Boiler (4.8 MMBtu/hr)	PM10	16	16	16	16	64
	PM2.5	16	16	16	16	64
	VOC	21	21	21	21	84
Total Boiler (4.8 MMBtu/hr)	NOx	22	22	22	22	88
	PM10	30	30	30	30	120
	PM2.5	30	30	30	30	120

MANAGEMENT DISTRICT

## **AUTHORITY TO CONSTRUCT**

(CONTINUED)

16. Prior to commencing construction/modification of this boiler, Grafil Inc. shall submit to the SMAQMD Emission Reduction Credit certificate(s) for the quarterly emissions in Condition No. 15 calculated according to the following ratios:

[SMAQMD Rule 202, Section 303.1]

Location of		Emission C	Offset Ratio	
Emission Offset	Volatile Organic Compounds or Nitrogen Oxides	PM2.5 or Ammonia	Other Nonattainment Pollutants	Attainment Pollutants
Same Source	1.3 to 1.0 if used at a major stationary source or major modification at a major source OR 1.0 to 1.0 if used at a non- major stationary source or non-major modifications at a major source	1.0 to 1.0	1.0 to 1.0	1.0 to 1.0
Within 15-mile Radius and within Sacramento Valley Air Basin	1.3 to 1.0 if used at a major stationary source or major modification at a major source OR 1.2 to 1.0 if used at a non- major stationary source or non-major modifications at a major source OR 1.0 to 1.0 if used at a stationary source with an emission increase calculated pursuant to Section 413.4 of the following levels: ≥5000 lb/qtr and <7500 lb/qtr	1.2 to 1.0	1.2 to 1.0	1.1 to 1.0

MANAGEMENT DISTRICT

# **AUTHORITY TO CONSTRUCT**

(CONTINUED)

l coefficient of	Emission Offset Ratio				
Location of Emission Offset	Volatile Organic Compounds or Nitrogen Oxides	PM2.5 or Ammonia	Other Nonattainment Pollutants	Attainment Pollutants	
Greater than 15- mile Radius and within Sacramento Valley Air Basin	2.0 to 1.0	2.0 to 1.0	2.0 to 1.0	1.2 to 1.0	
More than 50-mile Radius and within Sacramento Valley Air Basin	>2.0 to 1.0 (*)	>2.0 to 1.0 (*)	>2.0 to 1.0 (*)	>1.2 to 1.0 (*)	

<sup>(\*)</sup> Based on case-by-case determination.

17. If Grafil Inc. provides emission offsets as specified in Condition No. 15 from the SMAQMD Community Bank, they shall be calculated according to the following ratios:

[SMAQMD Rule 202, Section 303.2]

Emission Offsets Obtained from Rule 205 – Community Bank and Priority Reserve Bank or Rule 206 – Mobile and Transportation Source Emission Reduction Credits			
Source Type/Pollutant	Emission Offset Ratio		
For use by non-major stationary sources or non-major modifications for all pollutants if the non-major modifications has an increase in emissions calculated pursuant to Rule 202, Section 413.4 of 250 lb/day or less of VOC, NOx and SOx, and 80 lb/day or less of PM10.	1.0 to 1.0		
If the non-major modification has an increase in emissions calculated pursuant to Rule 202, Section 413.4 that is greater than 250 lb/day of VOC, NOx and SOx, or greater than 80 lb/day of PM10.	1.2 to 1.0		
For use by major stationary sources or major modifications for volatile organic compounds or nitrogen oxides.	1.3 to 1.0		
For use by major stationary sources or major modifications for other nonattainment pollutants, except for PM2.5 and all attainment pollutants.	1.2 to 1.0		

MANAGEMENT DISTRICT

## **AUTHORITY TO CONSTRUCT**

(CONTINUED)

Emission Offsets Obtained fro Rule 205 – Community Bank and Priority R Rule 206 – Mobile and Transportation Source Emis	leserve Bank or
Source Type/Pollutant Emission Offset Ratio	
For use by major stationary sources or major modifications for PM2.5 or ammonia if determined to be PM2.5 precursor by Rule 202, Section 234.	

#### RECORDKEEPING AND REPORTING

18. The following records shall be continuously maintained on-site for the most recent five-year period and shall be made available to the Air Pollution Control Officer upon request. Quarterly records as specified in the table below shall be made available for inspection within 30 days from the end of the reporting period.

[Basis: SMAQMD Rule 201, Section 405]

Frequency	Information to be Recorded
Quarterly	Total amount of fuel usage for the boiler (cf/quarter)

19. Emission test reports shall be maintained on-site and shall be made available to the Air Pollution Control Officer upon request. If a portable analyzer is used to verify compliance, all data specified in Attachment B of Rule 411 shall also be maintained on-site.

[Basis: SMAQMD Rule 411, Section 502]

20. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.).

[Basis: SMAQMD Rule 201, Section 303.1]

**MANAGEMENT DISTRICT** 

### **AUTHORITY TO CONSTRUCT**

(CONTINUED)

Your application for this air quality Authority to Construct was evaluated for compliance with Sacramento Metropolitan Air Quality Management District (SMAQMD), state and federal air quality rules. The following listed rules are those that are most applicable to the operation of your equipment. Other rules may also be applicable.

SMAQMD RULE NO.	RULE TITLE
201	GENERAL PERMIT REQUIREMENTS
202	NEW SOURCE REVIEW
301	PERMIT FEES - STATIONARY SOURCE
401	RINGELMANN CHART
402	NUISANCE
406	SPECIFIC CONTAMINANTS
411	NOx FROM BOILERS, PROCESS HEATERS AND STEAM GENERATORS
420	SULFUR CONTENT OF FUELS

In addition, the conditions on this Authority to Construct may reflect some, but not all, requirements of these rules. There may be other conditions that are applicable to the operation of your equipment. Future changes in prohibitory rules may establish more stringent requirements which may supersede the conditions listed here.

For further information, please consult your SMAQMD rulebook or contact the SMAQMD for assistance.

MANAGEMENT DISTRICT

**AUTHORITY TO CONSTRUCT** 

A/C NO.:

23364

**ISSUED BY:** 

**DATE ISSUED:** 

JUNE 5, 2012

**DATE EXPIRES:** 

JUNE 5, 2014

**ISSUED TO:** 

GRAFIL INC.

LOCATION:

5900 88<sup>TH</sup> STREET, SACRAMENTO, CA 95828

DESCRIPTION:

MODIFICATION OF FUEL USAGE LIMITATION:

BOILER, CLEAVER BROOKS, MODEL CBI 200-150-150, SERIAL NO. OL103578, 6.124 MMBTU/HR HEAT INPUT RATING, NATURAL GAS-FIRED. APPLICATION:

INDUSTRIAL PROCESS

### **AUTHORITY TO CONSTRUCT CONDITIONS**

### START-UP REQUIREMENTS

S1. Upon acceptance of the conditions authorized in this Authority to Construct, the owner/operator shall contact the Sacramento Metropolitan Air Quality Management District (SMAQMD) at (916)874-4858 to arrange for an initial inspection.

[Basis: SMAQMD Rule 201, Section 405]

- S2. This Authority to Construct/Operate shall serve as a temporary Permit to Operate provided that:
  - A. The SMAQMD has been notified to conduct an initial inspection,
  - B. The equipment installed matches the equipment authorized in this Authority to Construct, and
  - C. The equipment is operated in compliance with all conditions listed within this Authority to Construct.

[Basis: SMAQMD Rule 201, Section 405]

### **GENERAL**

1. The equipment shall be properly maintained and operated in accordance with the manufacturer's recommendations at all times.

- 2. The Air Pollution Control Officer and/or authorized representatives, upon the presentation of credentials, shall be permitted:
  - A. To enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this Authority to Construct, and
  - B. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct, and

MANAGEMENT DISTRICT

### **AUTHORITY TO CONSTRUCT**

(CONTINUED)

C. To inspect any equipment, operation, or method required in this Authority to Construct, and

D. To sample emissions from the source or require samples to be taken.

[Basis: SMAQMD Rule 201, Section 405]

3. This Authority to Construct does not authorize the emission of air contaminants in excess of those allowed by Division 26, Part 4, Chapter 3, of the California Health and Safety Code or the Rules and Regulations of the Sacramento Metropolitan Air Quality Management District.

[Basis: SMAQMD Rule 201, Section 405]

4. The equipment shall not discharge such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

[Basis: SMAQMD Rule 402, Section 301]

5. A legible copy of this Authority to Construct shall be maintained on the premises with the equipment. [Basis: SMAQMD Rule 201, Section 401]

### **EMISSION LIMITATIONS**

- 6. The equipment shall not discharge into the atmosphere any visible air contaminants other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour, which are as dark or darker than Ringelmann No. 1 or equivalent to or greater than 20% opacity.

  [Basis: SMAQMD Rule 401, Section 301]
- 7. The boiler, when burning natural gas, shall not emit:
  - A. Nitrogen Oxides (NOx) in excess of 9 ppmvd corrected to 3% Oxygen.
  - B. Carbon Monoxide (CO) in excess of 100 ppmvd corrected to 3% Oxygen

[Basis: SMAQMD Rule 202, Section 410.2 and Rule 411, Section 301]

8. Emissions from the boiler shall not exceed the following limits:

[Basis: SMAQMD Rule 202, Section 410.2 and Rule 411, Sections 301]

Pollutant	Emission Factors Maximum Allowable Emissions (B)				
	(A) (lb/mmcf)	(lb/day)	(lb/quarter)	(lb/year)	
VOC	5.5	0.8	40	160	
NOx	10.9	1.6	79	317	
SOx	0.6	0.1	4	9	
PM10	7.6	1.1	55	221	

MANAGEMENT DISTRICT

### **AUTHORITY TO CONSTRUCT**

(CONTINUED)

Pollutant	Emission Factors	Maximum / Mowable Embolone (				
	(A) (lb/mmcf)	(lb/day)	(lb/quarter)	(lb/year)		
PM2.5	7.6	1.1	55	221		
СО	74	10.9	538	2,152		
GHG	117,000	8.6 tons/day	425 tons/quarter	1,701 tons/year		

- (A) Emission factors for VOC, SOx, PM10 and PM2.5 are from AP-42, Table 1.4-1 ~ 1.4-2, Emission Factors from Natural Gas Combustion, pg 1.4-5 ~ 1.4-6 (7/98). Emission factors for NOx and CO are based on 9 ppmvd @ 3% O<sub>2</sub> and 100 ppmvd @ 3% O<sub>2</sub>, respectively. Emission factor for PM2.5 is the PM10 factor assuming all PM10 to be PM2.5. GHG emission factor is expressed as CO2e and is from EPA's Mandatory Reporting of Greenhouse Gases Rule (74 FR 56260), Tables C-1 & C-2.
- (B) Emissions are based on operating at maximum capacity of 0.006124 mmcf/hour, 24 hours/day, 7.270 mmcf/quarter, 29.08 mmcf/year and the emission factors in this table.

#### **EQUIPMENT OPERATION**

- 9. The boiler shall be fired only on pipeline-quality natural gas. [Basis: SMAQMD Rule 201, Section 405]
- 10. The boiler shall be equipped with a non-resetting totalizing fuel meter to ensure compliance with the Condition Nos.8 and 11. The totalizing function of the meter shall have the ability to read up to at least 100 million cubic feet of natural gas before rolling over.

[Basis: SMAQMD Rule 201, Section 405]

11. Natural gas fuel usage for the boiler shall not exceed the following limit:

[Basis: SMAQMD Rule 201, Section 405]

Fuel Type	Fuel Meter Type	Maximum Allowable Fuel Usage (cf/quarter)
Natural Gas	Pressure- and Temperature-Compensated	7,270,000 (A)

(A) This limit is based on a pressure- and temperature-compensated fuel meter. However, if the actual fuel meter installed is different from that described above, the source must submit to the SMAQMD the natural gas delivery line pressure (in inches H<sub>2</sub>O or psig) from PG&E in order to determine the appropriate meter adjustment factor.

MANAGEMENT DISTRICT

### **AUTHORITY TO CONSTRUCT**

(CONTINUED)

#### **EMISSIONS TESTING**

- 12. Emissions of nitrogen oxides, carbon monoxide and oxygen shall be tested within 60 days of modified operation to verify compliance with Condition No. 7. A compliance source test for nitrogen oxides, carbon monoxide and oxygen shall subsequently be performed once every second calendar year to demonstrate compliance with Condition No. 7.
  - A. Submit a source test plan to the Air Pollution Control Officer for approval at least 30 days before the source test is to be performed.
  - B. Notify the Air Pollution Control Officer at least 7 days prior to the source test date of the exact date and time of the test if the date has changed from that approved in the source test plan.
  - C. During source testing, the boiler shall be operated at a firing rate that is as close as physically possible to the rated capacity.
  - D. Submit the source test report to the Air Pollution Control Officer within 60 days from the completion of the test(s).

[Basis: SMAQMD Rule 201, Section 303.2 and Rule 411, Section 501.1]

- 13. Emission testing methods shall be those specified in Rule 411, Section 501 Boiler NOx.
  - A. Oxides of Nitrogen ARB Method 100 or EPA Method 7E
  - B. Carbon Monoxide ARB Method 100 or EPA Method 10
  - C. Stack Gas Oxygen ARB Method 100 or EPA Method 3A
  - D. Carbon Dioxide ARB Method 100 or EPA Method 3A

[Basis: SMAQMD Rule 411, Section 501]

### **EMISSION OFFSETS**

14. Grafil Inc. shall provide sufficient emission reduction credits (ERC) in accordance with Condition Nos. 15 and 16 to fully offset the following VOC, NOx, PM10 and PM2.5 emissions.
[SMAQMD Rule 202, Section 302.1]

		Emission Reduction Credit					
Permit No P/O 20149 Boiler (6.124 MMBtu/hr)  A/C 23364 Boiler (6.124 MMBtu/hr)	Pollutant	1 <sup>st</sup> Quarter (lb/quarter)	2 <sup>nd</sup> Quarter (lb/quarter)	3 <sup>rd</sup> Quarter (lb/quarter)	4 <sup>th</sup> Quarter (lb/quarter	Total (lb/year)	
P/O 20149	VOC	23	23	23	23	92	
	PM10	32	32	32	32	128	
	PM2.5	32	32	32	32	128	
	VOC	17	17	17	17	68	
i	NOx	33	33	33	33	132	
(6.124	PM10	23	23	23	23	92	
iviivibtu/nr)	PM2.5	23	23	23	23	92	

MANAGEMENT DISTRICT

# **AUTHORITY TO CONSTRUCT**

(CONTINUED)

		Emission Reduction Credit					
Permit No	Pollutant	1 <sup>st</sup> Quarter (lb/quarter)	2 <sup>nd</sup> Quarter (lb/quarter)	3 <sup>rd</sup> Quarter (lb/quarter)	4 <sup>th</sup> Quarter (lb/quarter	Total (lb/year)	
	VOC	40	40	40	40	160	
Total Boiler	NOx	33	33	33	33	132	
(6.124 MMBtu/hr)	PM10	55	55	55	55	220	
	PM2.5	55	55	55	55	220	

15. Prior to commencing construction/modification of this boiler, Grafil Inc. shall submit to the SMAQMD Emission Reduction Credit certificate(s) for the quarterly emissions in Condition No. 15 calculated according to the following ratios:

[SMAQMD Rule 202, Section 303.1]

Location of	Emission Offset Ratio					
Emission Offset	Volatile Organic Compounds or Nitrogen Oxides	PM2.5 or Ammonia	Other Nonattainment Pollutants	Attainment Pollutants		
Same Source	1.3 to 1.0 if used at a major stationary source or major modification at a major source OR 1.0 to 1.0 if used at a non- major stationary source or non-major modifications at a major source	1.0 to 1.0	1.0 to 1.0	1.0 to 1.0		

MANAGEMENT DISTRICT

# **AUTHORITY TO CONSTRUCT**

(CONTINUED)

Location of		Emission C	Offset Ratio	
Emission Offset	Volatile Organic Compounds or Nitrogen Oxides	PM2.5 or Ammonia	Other Nonattainment Pollutants	Attainment Pollutants
Within 15-mile Radius and within Sacramento Valley Air Basin	1.3 to 1.0 if used at a major stationary source or major modification at a major source OR 1.2 to 1.0 if used at a non- major stationary source or non-major modifications at a major source OR 1.0 to 1.0 if used at a stationary source with an emission increase calculated pursuant to Section 413.4 of the following levels: ≥5000 lb/qtr and <7500 lb/qtr	1.2 to 1.0	1.2 to 1.0	1.1 to 1.0
Greater than 15- mile Radius and within Sacramento Valley Air Basin	2.0 to 1.0	2.0 to 1.0	2.0 to 1.0	1.2 to 1.0
More than 50-mile Radius and within Sacramento Valley Air Basin	>2.0 to 1.0 (*)	>2.0 to 1.0 (*)	>2.0 to 1.0 (*)	>1.2 to 1.0 (*)

<sup>(\*)</sup> Based on case-by-case determination.

**MANAGEMENT DISTRICT** 

### **AUTHORITY TO CONSTRUCT**

(CONTINUED)

16. If Grafil Inc. provides emission offsets as specified in Condition No. 14 from the SMAQMD Community Bank, they shall be calculated according to the following ratios:

[SMAQMD Rule 202, Section 303.2]

Emission Offsets Obtained from Rule 205 – Community Bank and Priority Reserve Bank or Rule 206 – Mobile and Transportation Source Emission Reduction Credits						
Source Type/Pollutant Emission Offset Ratio						
For use by non-major stationary sources or non-major modifications for all pollutants if the non-major modifications has an increase in emissions calculated pursuant to Rule 202, Section 413.4 of 250 lb/day or less of VOC, NOx and SOx, and 80 lb/day or less of PM10.	1.0 to 1.0					
If the non-major modification has an increase in emissions calculated pursuant to Rule 202, Section 413.4 that is greater than 250 lb/day of VOC, NOx and SOx, or greater than 80 lb/day of PM10.	1.2 to 1.0					
For use by major stationary sources or major modifications for volatile organic compounds or nitrogen oxides.	1.3 to 1.0					
For use by major stationary sources or major modifications for other nonattainment pollutants, except for PM2.5 and all attainment pollutants.	1.2 to 1.0					
For use by major stationary sources or major modifications for PM2.5 or ammonia if determined to be PM2.5 precursor by Rule 202, Section 234.	1.0 to 1.0					

### RECORDKEEPING AND REPORTING

17. The following records shall be continuously maintained on-site for the most recent five-year period and shall be made available to the Air Pollution Control Officer upon request. Quarterly records as specified in the table below shall be made available for inspection within 30 days from the end of the reporting period.

Frequency	Information to be Recorded
Quarterly	Total amount of fuel usage for the boiler (cf/quarter)

MANAGEMENT DISTRICT

### **AUTHORITY TO CONSTRUCT**

(CONTINUED)

18. Emission test reports shall be maintained on-site and shall be made available to the Air Pollution Control Officer upon request.

[Basis: SMAQMD Rule 411, Section 502]

19. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.).

[Basis: SMAQMD Rule 201, Section 303.1]

Your application for this air quality Authority to Construct was evaluated for compliance with Sacramento Metropolitan Air Quality Management District (SMAQMD), state and federal air quality rules. The following listed rules are those that are most applicable to the operation of your equipment. Other rules may also be applicable.

SMAQMD RULE NO.	RULE TITLE
201	GENERAL PERMIT REQUIREMENTS
202	NEW SOURCE REVIEW
301	PERMIT FEES - STATIONARY SOURCE
401	RINGELMANN CHART
402	NUISANCE
406	SPECIFIC CONTAMINANTS
411	NOx FROM BOILERS, PROCESS HEATERS AND STEAM GENERATORS
420	SULFUR CONTENT OF FUELS

In addition, the conditions on this Authority to Construct may reflect some, but not all, requirements of these rules. There may be other conditions that are applicable to the operation of your equipment. Future changes in prohibitory rules may establish more stringent requirements which may supersede the conditions listed here.

For further information, please consult your SMAQMD rulebook or contact the SMAQMD for assistance.



# PERMIT TO OPERATE

**ISSUED TO:** 

GRAFIL INC.

EQUIPMENT LOCATION: 5900 88th St., SACRAMENTO, CA 95828

PERMIT NO.	EQUIPMENT DESCRIPTION								
21750	IC	ENGINE	STANDBY,	MAKE:	CLARK/JOHN	DEERE,	MODEL	NO:	
21730					O.: PE6068L0830				

### SUBJECT TO THE FOLLOWING CONDITIONS:

#### **GENERAL**

- 1. THE EQUIPMENT SHALL BE PROPERLY MAINTAINED.
- 2. THE AIR POLLUTION CONTROL OFFICER AND/OR AUTHORIZED REPRESENTATIVES, UPON THE PRESENTATION OF CREDENTIALS SHALL BE PERMITTED:
  - A. TO ENTER UPON THE PREMISES WHERE THE SOURCE IS LOCATED OR IN WHICH ANY RECORDS ARE REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
  - B. AT REASONABLE TIMES TO HAVE ACCESS TO AND COPY ANY RECORDS REQUIRED TO BE KEPT UNDER TERMS AND CONDITIONS OF THIS PERMIT TO OPERATE, AND
  - TO INSPECT ANY EQUIPMENT, OPERATION, OR METHOD REQUIRED IN THIS PERMIT TO OPERATE, AND
  - D. TO SAMPLE EMISSIONS FROM THE SOURCE OR REQUIRE SAMPLES TO BE TAKEN.
- 3. THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26, PART 4, CHAPTER 3, OF THE CALIFORNIA HEALTH AND SAFETY CODE OR THE RULES AND REGULATIONS OF THE AIR QUALITY MANAGEMENT DISTRICT.
- 4. A LEGIBLE COPY OF THIS PERMIT SHALL BE MAINTAINED ON THE PREMISES WITH THE EQUIPMENT.

LARRY GREENE

DATE ISSUED: 3-26-2010 AIR POLLUTION CONTROL OFFICER

**DATE REVISED: 4-16-2010** 

DATE EXPIRES: 10-24-2010 (UNLESS RENEWED)

BY: Bin F Kul

PAGE 1 OF 4 PAGES

PERMIT NO.: 21750

**REVOCABLE AND NON-TRANSFERABLE** 

(916) 874-4800 FAX (916) 874-4899

### SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

### **EMISSIONS LIMITATIONS**

THE IC ENGINE SHALL NOT DISCHARGE INTO THE ATMOSPHERE ANY VISIBLE AIR CONTAMINANTS OTHER THAN UNCOMBINED WATER VAPOR, FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR, WHICH ARE AS DARK OR DARKER THAN RINGELMANN NO. 1 OR EQUIVALENT TO OR GREATER THAN 20% OPACITY.

THE EMISSIONS FROM THE IC FNGINE SHALL NOT EXCEED THE FOLLOWING LIMITS:

EMISSIONS FROM TH POLLUTANT	EMISSION FACTOR(A)	MAXIMUM ALLOWABL	E EMISSIONS (B)
	G/HP-HR	LB/QUARTER	LB/YEAR
ROC	1.0	87	87
NOX	3.0	261	261
ROC + NOx	3.0	261	261
SOX	0.0048	0	0
PM10	0.15	13	13
CO	2.6	226	226

<sup>(</sup>A) EMISSION FACTORS FOR ROC, NOx, AND CO ARE BASED ON THE DISTRICT BACT LIMITS. PM IS BASED ON T-BACT LIMITS. SOX EMISSION FACTOR IS BASED UPON FUEL WITH 15 PPM SULFUR BY WEIGHT.

(B) EMISSIONS ARE BASED ON 197 BHP, 200 HOURS/QUARTER AND 200 HOURS/YEAR OF OPERATION.

#### **EQUIPMENT OPERATION**

7. THE IC ENGINE SHALL OPERATE ONLY FOR THE FOLLOWING PURPOSES AND SHALL NOT OPERATE MORE THAN THE FOLLOWING HOURS:

	MAXIMUM ALLOWABLE OPERATION	
TYPE OF OPERATIONAL HOURS	HOURS/QUARTER	HOURS/YEAR
MAINTENANCE PURPOSES (A)	50	50
ALL OPERATION - MAINTENANCE (A) AND EMERGENCY (B)	200	200

(A) MAINTENANCE PURPOSES IS DEFINED AS: THE OPERATION OF AN IC ENGINE IN ORDER TO PRESERVE THE INTEGRITY OF THE IC ENGINE AND ITS ASSOCIATED PUMP, THE FACILITY'S FIRE SUPPRESSION SYSTEM OR WHEN REQUIRED BY THE DISTRICT TO VERIFY COMPLIANCE WITH THE APPLICABLE RULES AND REGULATIONS

- (B) EMERGENCY IS DEFINED AS: WHEN A FIRE IS DETECTED AND THE FIRE PUMP IS OPERATED TO SUPPLY WATER FOR FIRE SUPPRESSION OR WHEN THERE IS AN UNFORESEEN LOSS OF PRESSURE IN THE FIRE SUPPRESSION SYSTEM SUCH THAT THE FIRE PUMP IS REQUIRED TO OPERATE IN ORDER TO MAINTAIN SUFFICIENT PRESSURE.
- 8. THE IC ENGINE SHALL BE EQUIPPED WITH A NON-RESETTING HOUR METER, WITH A MINIMUM DISPLAY CAPABILITY OF 9,999 HOURS, TO ENSURE COMPLIANCE WITH CONDITION NUMBERS 6 AND 7.
- 9. UPON REQUEST OF THE AIR POLLUTION CONTROL OFFICER OR DESIGNEE, ONCE EACH YEAR, DURING DAYLIGHT HOURS, THE IC ENGINE SHALL BE RUN AT MAXIMUM ANTICIPATED LOAD, FROM A COLD START CONDITION, FOR OBSERVATION OF COMPLIANCE WITH OPACITY LIMITATIONS.

**PERMIT NO.: 21750** 

777 12<sup>TH</sup> STREET, 3<sup>RD</sup> FLOOR SACRAMENTO, CA 95814-1908 (916) 874-4800 FAX (916) 874-4899

# SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

10. THE IC ENGINE SHALL BE FUELED WITH CARB DIESEL FUEL, OR AN ALTERNATIVE DIESEL FUEL THAT MEETS THE REQUIREMENTS OF THE VERIFICATION PROCEDURE (AS CODIFIED IN TITLE 13, CCR, SECTIONS 2700-2710), OR AN ALTERNATIVE FUEL, OR CARB DIESEL FUEL USED WITH FUEL ADDITIVES THAT MEETS THE REQUIREMENTS OF THE VERIFICATION PROCEDURE, OR ANY COMBINATION OF FUELS LISTED IN THIS CONDITION.

### **RECORD KEEPING**

11. THE FOLLOWING RECORDS SHALL BE CONTINUOUSLY MAINTAINED ONSITE FOR THE MOST RECENT THREE YEAR PERIOD AND SHALL BE MADE AVAILABLE TO THE AIR POLLUTION CONTROL OFFICER UPON REQUEST. MONTHLY, QUARTERLY, AND YEARLY RECORDS SHALL BE MADE AVAILABLE WITHIN 30 DAYS OF END OF REPORTING PERIOD.

FREQUENCY	INFORMATION TO BE RECORDED	
WHEN OPERATED	A. DATE. B. PURPOSE - EITHER MAINTENANCE (M), EMERGENCY POWER (E). C. NUMBER OF HOURS OF OPERATION.	
MONTHLY	D. TOTAL NUMBER OF HOURS OF OPERATION FOR EACH OPERATING MODE (HOURS/MONTH).	
QUARTERLY	E. TOTAL NUMBER OF HOURS OF OPERATION FOR EACH OPERATING MODE (HOURS/QUARTER).	
YEARLY	F. TOTAL NUMBER OF HOURS OF OPERATION FOR EACH OPERATING MODE (HOURS/YEAR).	
ALL FUEL DELIVERIES	<ul> <li>G. RETAIN FUEL PURCHASE RECORDS THAT ACCOUNT FOR ALL FUEL PURCHASED FOR USE IN THE ENGINE. FUEL PURCHASE RECORDS SHALL INCLUDE: <ol> <li>IDENTIFICATION OF TYPE OF FUEL (CARB DIESEL, ALTERNATE DIESEL, ETC.)</li> </ol> </li> <li>QUANTITY OF FUEL PURCHASED.</li> <li>DATE OF FUEL PURCHASE.</li> <li>SIGNATURE OF PERSON RECEIVING FUEL.</li> <li>SIGNATURE OF FUEL PROVIDER INDICATING THAT FUEL WAS DELIVERED.</li> </ul>	

**PERMIT NO.: 21750** 

(916) 874-4800 FAX (916) 874-4899

### SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

YOUR APPLICATION FOR THIS AIR QUALITY PERMIT TO OPERATE WAS EVALUATED FOR COMPLIANCE WITH SACRAMENTO AIR QUALITY MANAGEMENT DISTRICT (AQMD), STATE AND FEDERAL AIR QUALITY RULES. THE FOLLOWING LISTED RULES ARE THOSE THAT ARE MOST APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. OTHER RULES MAY ALSO BE APPLICABLE.

AQMD RULE NO.	RULE TITLE
201	GENERAL PERMIT REQUIREMENTS
202	NEW SOURCE REVIEW
301	PERMIT FEES
401	RINGELMANN CHART
402	NUISANCE
406	SPECIFIC CONTAMINANTS
412	STATIONARY IC ENGINES LOCATED AT MAJOR STATIONARY SOURCES OF NOX
420	SULFUR CONTENT OF FUELS
904	AIR TOXICS CONTROL MEASURES STATIONARY COMPRESSION IGNITION ENGINES
NESHAP Subpart ZZZZ	NATIONAL EMISSION STANDARD FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES
NSPS Subpart IIII	STANDARDS OF PERFORMANCE FOR STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES
	THE PARTY OF THE PARTY OF THE PARTY OF THE PROPERTY OF THE PARTY OF TH

IN ADDITION, THE CONDITIONS ON THIS PERMIT TO OPERATE MAY REFLECT SOME, BUT NOT ALL, REQUIREMENTS OF THESE RULES. THERE MAY BE OTHER CONDITIONS THAT ARE APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. FUTURE CHANGES IN PROHIBITORY RULES MAY ESTABLISH MORE STRINGENT REQUIREMENTS WHICH MAY SUPERSEDE THE CONDITIONS LISTED HERE.

FOR FURTHER INFORMATION PLEASE CONSULT YOUR AQMD RULEBOOK OR CONTACT THE AQMD FOR ASSISTANCE.

MANAGEMENT DISTRICT

**AUTHORITY TO CONSTRUCT** 

A/C NO.:

23366

**ISSUED BY:** 

DATE ISSUED:

JUNE 5, 2012

DATE EXPIRES:

JUNE 5, 2014

**ISSUED TO:** 

GRAFIL INC.

LOCATION:

5900 88<sup>TH</sup> STREET, SACRAMENTO, CA 95828

**DESCRIPTION:** 

IC ENGINE EMERGENCY STANDBY, GENERAC, MODEL SG 150, SERIAL NO. TO

BE VERIFIED, 231 BHP @ 3600 RPM, 6.8 L DISPLACEMENT, NATURAL GAS-

FUELED, DRIVING AN EMERGENCY ELECTRIC GENERATOR

### **AUTHORITY TO CONSTRUCT CONDITIONS**

#### START-UP REQUIREMENTS

S1. Upon installation of the equipment authorized in this Authority to Construct, the owner/operator shall contact the Sacramento Metropolitan Air Quality Management District (SMAQMD) at (916)874-4858 to arrange for a start-up inspection.

[Basis: SMAQMD Rule 201, Section 405]

- S2. This Authority to Construct shall serve as a temporary Permit to Operate provided that:
  - The SMAQMD has been notified to conduct a start-up inspection,
  - The equipment installed matches the equipment authorized in this Authority to Construct, and B.
  - The equipment is operated in compliance with all conditions listed within this Authority to Construct.

[Basis: SMAQMD Rule 201, Section 405]

### **GENERAL**

The equipment shall be properly maintained and operated in accordance with the manufacturer's 1. recommendations at all times.

- The Air Pollution Control Officer and/or authorized representatives, upon the presentation of credentials, 2. shall be permitted:
  - To enter upon the premises where the source is located or in which any records are required to be Α. kept under the terms and conditions of this Authority to Construct, and
  - At reasonable times to have access to and copy any records required to be kept under the terms B. and conditions of this Authority to Construct, and

MANAGEMENT DISTRICT

### **AUTHORITY TO CONSTRUCT**

(CONTINUED)

C. To inspect any equipment, operation, or method required in this Authority to Construct, and

D. To sample emissions from the source or require samples to be taken.

[Basis: SMAQMD Rule 201, Section 405]

- This Authority to Construct does not authorize the emission of air contaminants in excess of those allowed by Division 26, Part 4, Chapter 3, of the California Health and Safety Code or the Rules and Regulations of the Sacramento Metropolitan Air Quality Management District.
   [Basis: SMAQMD Rule 201, Section 405]
- 4. The equipment shall not discharge such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

[Basis: SMAQMD Rule 402, Section 301]

5. A legible copy of this authority to construct shall be maintained on the premises with the equipment. [Basis: SMAQMD Rule 201, Section 401]

### **EMISSION LIMITATIONS**

6. The IC engine shall not discharge into the atmosphere any visible air contaminants other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour, which are as dark or darker than Ringelmann No. 1 or equivalent to or greater than 20% opacity.

[Basis: SMAQMD Rule 401, Section 301]

7. Emissions from the IC engine, when fueled with natural gas, shall not exceed the following limits: [Basis: SMAQMD Rule 201, Section 405 and Rule 202, Sections 301 and 410.2]

Pollutant	Emission Factor	Maximum Allowable Emissions (B)		
	(A) (g/hp-hr)	(lb/day)	(lb/quarter)	(lb/year)
VOC	0.18	2.2	18	18
NOx	0.14	1.7	14	14
SOx	0.002	0.02	0.2	0.2
PM10	0.04	0.5	4	4
PM2.5	0.04	0.5	4	4
CO	1.54	18.8	157	157
GHG	372	2.3 tons/day	19 tons/quarter	19 tons/year

MANAGEMENT DISTRICT

### **AUTHORITY TO CONSTRUCT**

(CONTINUED)

- (A) Emission factors VOC, NOx and CO are based on the manufacturer's emissions data for Generac 2012 EPA Certified Gas Industrial Generators California Units (2/12). Emission factors for SOx, PM10 and PM2.5 are uncontrolled values from AP-42, Table 3.2-3, *Uncontrolled Emission Factors for 4-Stroke Rich-burn Engines*, pg 3.2-15 (7/00). For filterable PM emissions, PM10 is equal to PM2.5. GHG emission factor is expressed as CO₂e and is from EPA's *Mandatory Reporting of Greenhouse Gases* Rule (74 FR 58260), Tables C-1 & C-2.
- (B) Emissions are based on 231 hp, 24 hours/day, 200 hours/quarter and 200 hours/year of operation, and the emission factors in this table.

### **EQUIPMENT OPERATION**

8. The IC engine shall operate only for the following purposes and shall not operate more than the following hours:

[Basis: SMAQMD Rule 202, Section 110.2]

Torre of One and in a little and	Maximum Allowable Operation	
Type of Operational Hours	Hours/quarter	Hours/year
Maintenance Purposes (A)	100	100
All Operations – Maintenance and Emergency (B)	200	200

- (A) Maintenance purposes is defined as: The operation of an IC engine in order to preserve the integrity of the IC engine, its associated generator, the facility's electrical distribution system, or when required by the District to verify compliance with the applicable rules and regulations.
- (B) Emergency is defined as: When electrical service from the serving utility is interrupted by an unforeseeable event.
- The IC engine shall be equipped with a non-resetting hour meter, with a minimum display capability of 9,999 hours, to ensure compliance with Condition Nos. 7 and 8.

[Basis: SMAQMD Rule 201, Section 405]

10. Upon request of the Air Pollution Control Officer, once each year, during daylight hours, the IC engine shall be run at maximum anticipated load, from a cold start condition, for observation of compliance with opacity limitations.

[Basis: SMAQMD Rule 201, Section 405]

11. The exhaust stack of the IC engine shall exit vertically and shall not be obstructed during IC engine operation. A flapper-type rain cap will comply with this condition provided it does not impede the vertical flow of exhaust.

MANAGEMENT DISTRICT

# **AUTHORITY TO CONSTRUCT**

(CONTINUED)

#### RECORDKEEPING AND REPORTING

12. The following records shall be continuously maintained on-site for the most recent five-year period and shall be made available to the Air Pollution Control Officer upon request. Monthly, quarterly and yearly records as specified in the table below shall be made available for inspection within 30 days from the end of the reporting period.

[Basis: SMAQMD Rule 201, Section 405]

Frequency	Information to be recorded		
When Operated	<ul> <li>A. Date</li> <li>B. Purpose – either maintenance (M) or emergency (E).</li> <li>C. Number of hours of operation.</li> <li>D. Start and end time of IC engine for maintenance operation.</li> </ul>		
Monthly	E. Total number of hours of operation for each operating mode (hours/month).		
Quarterly	F. Total number of hours of operation for each operating mode (hours/quarter).		
Yearly	G. Total number of hours of operation for each operating mode (hours/year).		

13. By January 31<sup>st</sup> of every year, the permittee shall submit to the SMAQMD the total number of hours each engine operated during the previous year for maintenance, emergency, and total (maintenance + emergency + other). Copies of the ANNUAL ENGINE SURVEY can be found at <a href="https://www.airquality.org">www.airquality.org</a>. Upon determination of applicability and written notification by the SMAQMD, the permittee shall also comply with any other applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.).

MANAGEMENT DISTRICT

# **AUTHORITY TO CONSTRUCT**

(CONTINUED)

Your application for this air quality Authority to Construct was evaluated for compliance with Sacramento Metropolitan Air Quality Management District (SMAQMD), state and federal air quality rules. The following listed rules are those that are most applicable to the operation of your equipment. Other rules may also be applicable.

SMAQMD RULE NO.	RULE TITLE
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402	NUISANCE
406	SPECIFIC CONTAMINANTS
420	SULFUR CONTENT OF FUELS

In addition, the conditions on this Authority to Construct may reflect some, but not all, requirements of these rules. There may be other conditions that are applicable to the operation of your equipment. Future changes in prohibitory rules may establish more stringent requirements which may supersede the conditions listed here.

For further information, please consult your SMAQMD rulebook or contact the SMAQMD for assistance.